Weekly tracking sheets

Data Science · 120 weeks · 6 semesters · 1293 h of coursework

Name: _____

Study partner: _____

Start date: ___ / ___ / _____

HOW TO USE

1. **Start of semester:** read the semester overview page and write down your goal.
2. **Sunday evening:** fill in the dates and the goal on the week's sheet.
3. **During the week:** tick each finished task and log your real time every day.
4. **Partner check-in:** explain one idea in 5 minutes without notes.
5. **End of week:** rate your skills; a skill is acquired when you can do it alone.
6. **Weeks 19 and 20:** finish the semester project and sign it off.

THE SIX SEMESTERS

S1 · Programming and thinking with data
Year 1 · 207 h

S2 · Calculus and linear algebra
Year 1 · 191 h

S3 · Discrete mathematics and algorithms
Year 2 · 173 h

S4 · Probability and statistical modeling
Year 2 · 269 h

S5 · Data and machine learning
Year 3 · 191 h

S6 · Advanced AI
Year 3 · 262 h

S1

YEAR 1 · FOUNDATIONS · 207 H · ≈ 10.3 H PER WEEK

Programming and thinking with data

From ___ / ___ to ___ / ___

> Write your first Python programs, work with files, the web and SQL databases, and build a critical understanding of data and AI.

SEMESTER PROGRAMME

Course	Length	Weeks	Done
How to Describe Data Understanding Data: Navigating Statistics, Science, and AI	9 h	W. 1	☐
How Science Turns Data Into Knowledge Understanding Data: Navigating Statistics, Science, and AI	11 h	W. 1–2	☐
Decoding AI: A Deep Dive into AI Models and Predictions Understanding Data: Navigating Statistics, Science, and AI	10 h	W. 2–3	☐
Programming for Everybody (Getting Started with Python) Python for Everybody Specialization	17 h	W. 3–5	☐
Python Data Structures Python for Everybody Specialization	20 h	W. 5–7	☐
Using Python to Access Web Data Python for Everybody Specialization	19 h	W. 7–9	☐
Using Databases with Python Python for Everybody Specialization	14 h	W. 9–10	☐
Capstone: Retrieving, Processing, and Visualizing Data with Python Python for Everybody Specialization	9 h	W. 10–11	☐
An Introduction to Interactive Programming in Python (Part 1) Fundamentals of Computing Specialization	19 h	W. 11–13	☐
An Introduction to Interactive Programming in Python (Part 2) Fundamentals of Computing Specialization	16 h	W. 13–14	☐
Principles of Computing (Part 1) Fundamentals of Computing Specialization	19 h	W. 14–16	☐
Principles of Computing (Part 2) Fundamentals of Computing Specialization	16 h	W. 16–18	☐
Algorithmic Thinking (Part 1) Fundamentals of Computing Specialization	14 h	W. 18–19	☐
Algorithmic Thinking (Part 2) Fundamentals of Computing Specialization	13 h	W. 19–20	☐
The Fundamentals of Computing Capstone Exam Fundamentals of Computing Specialization	1 h	W. 20	☐

TARGET SKILLS

- ☐ Python variables, loops, functions and data structures
- ☐ Reading files, accessing the web and APIs, SQL queries
- ☐ Algorithmic thinking: interactive programs, basic combinatorics, graphs
- ☐ Critical reading of a statistic, a study or an AI prediction

SEMESTER PROJECT

The Python for Everybody capstone (collecting, storing and visualizing web data), then the Fundamentals of Computing final exam.

Signed off on ___ / ___ / _____

READING

- ☐ Python for Everybody: Exploring Data in Python 3
- ☐ Think Python, 3rd edition

MY GOAL FOR THIS SEMESTER

1

YEAR 1 · S1 · WEEK 1/20 · ≈ 10.3 H

How to Describe Data

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ How to Describe Data · ≈ 9 h
- ☐ How Science Turns Data Into Knowledge · start · ≈ 1.3 h
- ☐ Reading: Python for Everybody: Exploring Data in Python 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Python variables, loops, functions and data structures	☐	☐	☐	☐
Reading files, accessing the web and APIs, SQL queries	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

2

YEAR 1 · S1 · WEEK 2/20 · ≈ 10.3 H

How Science Turns Data Into Knowledge

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ How Science Turns Data Into Knowledge · finish · ≈ 9.7 h
- ☐ Decoding AI: A Deep Dive into AI Models and Predictions · start · ≈ 0.7 h
- ☐ Reading: Think Python, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Algorithmic thinking: interactive programs, basic combinatorics, graphs	☐	☐	☐	☐
Critical reading of a statistic, a study or an AI prediction	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

3

YEAR 1 · S1 · WEEK 3/20 · ≈ 10.3 H

Decoding AI: A Deep Dive into AI Models and Predictions

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Decoding AI: A Deep Dive into AI Models and Predictions · finish · ≈ 9.3 h
- ☐ Programming for Everybody (Getting Started with Python) · start · ≈ 1 h
- ☐ Reading: Python for Everybody: Exploring Data in Python 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Python variables, loops, functions and data structures	☐	☐	☐	☐
Reading files, accessing the web and APIs, SQL queries	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

4

YEAR 1 · S1 · WEEK 4/20 · ≈ 10.3 H

Programming for Everybody (Getting Started with Python)

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Programming for Everybody (Getting Started with Python) · continued · ≈ 10.4 h
- ☐ Reading: Think Python, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Algorithmic thinking: interactive programs, basic combinatorics, graphs	☐	☐	☐	☐
Critical reading of a statistic, a study or an AI prediction	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

5

YEAR 1 · S1 · WEEK 5/20 · ≈ 10.3 H

Programming for Everybody (Getting Started with Python)

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Programming for Everybody (Getting Started with Python) · finish · ≈ 5.6 h
- ☐ Python Data Structures · start · ≈ 4.8 h
- ☐ Reading: Python for Everybody: Exploring Data in Python 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Python variables, loops, functions and data structures	☐	☐	☐	☐
Reading files, accessing the web and APIs, SQL queries	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

6

YEAR 1 · S1 · WEEK 6/20 · ≈ 10.3 H

Python Data Structures

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Python Data Structures · continued · ≈ 10.3 h
- ☐ Reading: Think Python, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Algorithmic thinking: interactive programs, basic combinatorics, graphs	☐	☐	☐	☐
Critical reading of a statistic, a study or an AI prediction	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

7

YEAR 1 · S1 · WEEK 7/20 · ≈ 10.3 H

Python Data Structures

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Python Data Structures · finish · ≈ 4.9 h
- ☐ Using Python to Access Web Data · start · ≈ 5.5 h
- ☐ Reading: Python for Everybody: Exploring Data in Python 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Python variables, loops, functions and data structures	☐	☐	☐	☐
Reading files, accessing the web and APIs, SQL queries	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

8

YEAR 1 · S1 · WEEK 8/20 · ≈ 10.3 H

Using Python to Access Web Data

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Using Python to Access Web Data · continued · ≈ 10.3 h
- ☐ Reading: Think Python, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Algorithmic thinking: interactive programs, basic combinatorics, graphs	☐	☐	☐	☐
Critical reading of a statistic, a study or an AI prediction	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

9

YEAR 1 · S1 · WEEK 9/20 · ≈ 10.3 H

Using Python to Access Web Data

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Using Python to Access Web Data · finish · ≈ 3.2 h
- ☐ Using Databases with Python · start · ≈ 7.1 h
- ☐ Reading: Python for Everybody: Exploring Data in Python 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Python variables, loops, functions and data structures	☐	☐	☐	☐
Reading files, accessing the web and APIs, SQL queries	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

10

YEAR 1 · S1 · WEEK 10/20 · ≈ 10.3 H

Using Databases with Python

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Using Databases with Python · finish · ≈ 6.9 h
- ☐ Capstone: Retrieving, Processing, and Visualizing Data with Python · start · ≈ 3.5 h
- ☐ Reading: Think Python, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Algorithmic thinking: interactive programs, basic combinatorics, graphs	☐	☐	☐	☐
Critical reading of a statistic, a study or an AI prediction	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

11

YEAR 1 · S1 · WEEK 11/20 · ≈ 10.3 H

Capstone: Retrieving, Processing, and Visualizing Data with Python

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Capstone: Retrieving, Processing, and Visualizing Data with Python · finish · ≈ 5.5 h
- ☐ An Introduction to Interactive Programming in Python (Part 1) · start · ≈ 4.8 h
- ☐ Reading: Python for Everybody: Exploring Data in Python 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Python variables, loops, functions and data structures	☐	☐	☐	☐
Reading files, accessing the web and APIs, SQL queries	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

12

YEAR 1 · S1 · WEEK 12/20 · ≈ 10.3 H

An Introduction to Interactive Programming in Python (Part 1)

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ An Introduction to Interactive Programming in Python (Part 1) · continued · ≈ 10.3 h
- ☐ Reading: Think Python, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Algorithmic thinking: interactive programs, basic combinatorics, graphs	☐	☐	☐	☐
Critical reading of a statistic, a study or an AI prediction	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

13

YEAR 1 · S1 · WEEK 13/20 · ≈ 10.3 H

An Introduction to Interactive Programming in Python (Part 1)

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ An Introduction to Interactive Programming in Python (Part 1) · finish · ≈ 3.8 h
- ☐ An Introduction to Interactive Programming in Python (Part 2) · start · ≈ 6.5 h
- ☐ Reading: Python for Everybody: Exploring Data in Python 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Python variables, loops, functions and data structures	☐	☐	☐	☐
Reading files, accessing the web and APIs, SQL queries	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

14 An Introduction to Interactive Programming in Python (Part 2)

YEAR 1 · S1 · WEEK 14/20 · ≈ 10.3 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ An Introduction to Interactive Programming in Python (Part 2) · finish · ≈ 9.5 h
- ☐ Principles of Computing (Part 1) · start · ≈ 0.9 h
- ☐ Reading: Think Python, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Algorithmic thinking: interactive programs, basic combinatorics, graphs	☐	☐	☐	☐
Critical reading of a statistic, a study or an AI prediction	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

15

YEAR 1 · S1 · WEEK 15/20 · ≈ 10.3 H

Principles of Computing (Part 1)

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Principles of Computing (Part 1) · continued · ≈ 10.3 h
- ☐ Reading: Python for Everybody: Exploring Data in Python 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Python variables, loops, functions and data structures	☐	☐	☐	☐
Reading files, accessing the web and APIs, SQL queries	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

16

YEAR 1 · S1 · WEEK 16/20 · ≈ 10.3 H

Principles of Computing (Part 1)

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Principles of Computing (Part 1) · finish · ≈ 7.8 h
- ☐ Principles of Computing (Part 2) · start · ≈ 2.6 h
- ☐ Reading: Think Python, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Algorithmic thinking: interactive programs, basic combinatorics, graphs	☐	☐	☐	☐
Critical reading of a statistic, a study or an AI prediction	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

17

YEAR 1 · S1 · WEEK 17/20 · ≈ 10.3 H

Principles of Computing (Part 2)

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Principles of Computing (Part 2) · continued · ≈ 10.3 h
- ☐ Reading: Python for Everybody: Exploring Data in Python 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Python variables, loops, functions and data structures	☐	☐	☐	☐
Reading files, accessing the web and APIs, SQL queries	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

18

YEAR 1 · S1 · WEEK 18/20 · ≈ 10.3 H

Principles of Computing (Part 2)

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Principles of Computing (Part 2) · finish · ≈ 3.1 h
- ☐ Algorithmic Thinking (Part 1) · start · ≈ 7.3 h
- ☐ Reading: Think Python, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Algorithmic thinking: interactive programs, basic combinatorics, graphs	☐	☐	☐	☐
Critical reading of a statistic, a study or an AI prediction	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

19

YEAR 1 · S1 · WEEK 19/20 · ≈ 10.3 H

Algorithmic Thinking (Part 1)

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Algorithmic Thinking (Part 1) · finish · ≈ 6.7 h
- ☐ Algorithmic Thinking (Part 2) · start · ≈ 3.7 h
- ☐ **Semester project**: The Python for Everybody capstone (collecting, storing and visualizing web data), then the Fundamentals of Computing final exam.
- ☐ Reading: Python for Everybody: Exploring Data in Python 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Python variables, loops, functions and data structures	☐	☐	☐	☐
Reading files, accessing the web and APIs, SQL queries	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

20

YEAR 1 · S1 · WEEK 20/20 · ≈ 10.3 H

Algorithmic Thinking (Part 2)

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Algorithmic Thinking (Part 2) · finish · ≈ 9.3 h
- ☐ The Fundamentals of Computing Capstone Exam · ≈ 1 h
- ☐ **Semester project**: The Python for Everybody capstone (collecting, storing and visualizing web data), then the Fundamentals of Computing final exam.
- ☐ Reading: Think Python, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Algorithmic thinking: interactive programs, basic combinatorics, graphs	☐	☐	☐	☐
Critical reading of a statistic, a study or an AI prediction	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

S2

YEAR 1 · FOUNDATIONS · 191 H · ≈ 9.6 H PER WEEK

Calculus and linear algebra

From ___ / ___ to ___ / ___

Acquire the continuous mathematical tools on which all of statistics and machine learning depend.

SEMESTER PROGRAMME

Course	Length	Weeks	Done
Calculus for Engineers Calculus for Engineers	30 h	W. 1–4	☐
Linear Algebra: Linear Systems and Matrix Equations Linear Algebra from Elementary to Advanced	10 h	W. 4–5	☐
Linear Algebra: Matrix Algebra, Determinants, & Eigenvectors Linear Algebra from Elementary to Advanced	15 h	W. 5–6	☐
Linear Algebra: Orthogonality and Diagonalization Linear Algebra from Elementary to Advanced	9 h	W. 6–7	☐
Matrix Algebra for Engineers Mathematics for Engineers	20 h	W. 7–9	☐
Differential Equations for Engineers Mathematics for Engineers	27 h	W. 9–12	☐
Vector Calculus for Engineers Mathematics for Engineers	30 h	W. 12–15	☐
Numerical Methods for Engineers Mathematics for Engineers	40 h	W. 15–19	☐
Mathematics for Engineers: The Capstone Course Mathematics for Engineers	10 h	W. 19–20	☐

TARGET SKILLS

- ☐ Derivatives, integrals, series and applications of single-variable calculus
- ☐ Vectors, matrices, determinants, eigenvalues, orthogonality
- ☐ Differential equations and vector calculus
- ☐ Numerical methods and scientific programming in MATLAB

SEMESTER PROJECT

The Mathematics for Engineers capstone: numerical computation of the flow past a cylinder (Kármán vortex street).

Signed off on ___ / ___ / _____

READING

- ☐ Calculus, Volume 1
- ☐ Introduction to Applied Linear Algebra: Vectors, Matrices, and Least Squares
- ☐ Mathematics for Machine Learning

MY GOAL FOR THIS SEMESTER

21

YEAR 1 · S2 · WEEK 1/20 · ≈ 9.6 H

Calculus for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Calculus for Engineers · start · ≈ 9.6 h
- ☐ Reading: Calculus, Volume 1

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Derivatives, integrals, series and applications of single-variable calculus	☐	☐	☐	☐
Vectors, matrices, determinants, eigenvalues, orthogonality	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

22

YEAR 1 · S2 · WEEK 2/20 · ≈ 9.6 H

Calculus for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Calculus for Engineers · continued · ≈ 9.6 h
- ☐ Reading: Introduction to Applied Linear Algebra: Vectors, Matrices, and Least Squares

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Differential equations and vector calculus	☐	☐	☐	☐
Numerical methods and scientific programming in MATLAB	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

23

YEAR 1 · S2 · WEEK 3/20 · ≈ 9.6 H

Calculus for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Calculus for Engineers · continued · ≈ 9.6 h
- ☐ Reading: Mathematics for Machine Learning

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Derivatives, integrals, series and applications of single-variable calculus	☐	☐	☐	☐
Vectors, matrices, determinants, eigenvalues, orthogonality	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

24

YEAR 1 · S2 · WEEK 4/20 · ≈ 9.6 H

Calculus for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Calculus for Engineers · finish · ≈ 1.3 h
- ☐ Linear Algebra: Linear Systems and Matrix Equations · start · ≈ 8.2 h
- ☐ Reading: Calculus, Volume 1

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Differential equations and vector calculus	☐	☐	☐	☐
Numerical methods and scientific programming in MATLAB	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

25

YEAR 1 · S2 · WEEK 5/20 · ≈ 9.6 H

Linear Algebra: Linear Systems and Matrix Equations

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Linear Algebra: Linear Systems and Matrix Equations · finish · ≈ 1.8 h
- ☐ Linear Algebra: Matrix Algebra, Determinants, & Eigenvectors · start · ≈ 7.8 h
- ☐ Reading: Introduction to Applied Linear Algebra: Vectors, Matrices, and Least Squares

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Derivatives, integrals, series and applications of single-variable calculus	☐	☐	☐	☐
Vectors, matrices, determinants, eigenvalues, orthogonality	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

26

YEAR 1 · S2 · WEEK 6/20 · ≈ 9.6 H

Linear Algebra: Matrix Algebra, Determinants, & Eigenvectors

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Linear Algebra: Matrix Algebra, Determinants, & Eigenvectors · finish · ≈ 7.2 h
- ☐ Linear Algebra: Orthogonality and Diagonalization · start · ≈ 2.3 h
- ☐ Reading: Mathematics for Machine Learning

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Differential equations and vector calculus	☐	☐	☐	☐
Numerical methods and scientific programming in MATLAB	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

27

YEAR 1 · S2 · WEEK 7/20 · ≈ 9.6 H

Linear Algebra: Orthogonality and Diagonalization

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Linear Algebra: Orthogonality and Diagonalization · finish · ≈ 6.7 h
- ☐ Matrix Algebra for Engineers · start · ≈ 2.9 h
- ☐ Reading: Calculus, Volume 1

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Derivatives, integrals, series and applications of single-variable calculus	☐	☐	☐	☐
Vectors, matrices, determinants, eigenvalues, orthogonality	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

28

YEAR 1 · S2 · WEEK 8/20 · ≈ 9.6 H

Matrix Algebra for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Matrix Algebra for Engineers · continued · ≈ 9.5 h
- ☐ Reading: Introduction to Applied Linear Algebra: Vectors, Matrices, and Least Squares

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Differential equations and vector calculus	☐	☐	☐	☐
Numerical methods and scientific programming in MATLAB	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

29

YEAR 1 · S2 · WEEK 9/20 · ≈ 9.6 H

Matrix Algebra for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Matrix Algebra for Engineers · finish · ≈ 7.6 h
- ☐ Differential Equations for Engineers · start · ≈ 2 h
- ☐ Reading: Mathematics for Machine Learning

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Derivatives, integrals, series and applications of single-variable calculus	☐	☐	☐	☐
Vectors, matrices, determinants, eigenvalues, orthogonality	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

30

YEAR 1 · S2 · WEEK 10/20 · ≈ 9.6 H

Differential Equations for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Differential Equations for Engineers · continued · ≈ 9.5 h
- ☐ Reading: Calculus, Volume 1

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Differential equations and vector calculus	☐	☐	☐	☐
Numerical methods and scientific programming in MATLAB	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

31

YEAR 1 · S2 · WEEK 11/20 · ≈ 9.6 H

Differential Equations for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Differential Equations for Engineers · continued · ≈ 9.6 h
- ☐ Reading: Introduction to Applied Linear Algebra: Vectors, Matrices, and Least Squares

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Derivatives, integrals, series and applications of single-variable calculus	☐	☐	☐	☐
Vectors, matrices, determinants, eigenvalues, orthogonality	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

32

YEAR 1 · S2 · WEEK 12/20 · ≈ 9.6 H

Differential Equations for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Differential Equations for Engineers · finish · ≈ 5.9 h
- ☐ Vector Calculus for Engineers · start · ≈ 3.6 h
- ☐ Reading: Mathematics for Machine Learning

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Differential equations and vector calculus	☐	☐	☐	☐
Numerical methods and scientific programming in MATLAB	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

33

YEAR 1 · S2 · WEEK 13/20 · ≈ 9.6 H

Vector Calculus for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Vector Calculus for Engineers · continued · ≈ 9.5 h
- ☐ Reading: Calculus, Volume 1

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Derivatives, integrals, series and applications of single-variable calculus	☐	☐	☐	☐
Vectors, matrices, determinants, eigenvalues, orthogonality	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

34

YEAR 1 · S2 · WEEK 14/20 · ≈ 9.6 H

Vector Calculus for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Vector Calculus for Engineers · continued · ≈ 9.6 h
- ☐ Reading: Introduction to Applied Linear Algebra: Vectors, Matrices, and Least Squares

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Differential equations and vector calculus	☐	☐	☐	☐
Numerical methods and scientific programming in MATLAB	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

35

YEAR 1 · S2 · WEEK 15/20 · ≈ 9.6 H

Vector Calculus for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Vector Calculus for Engineers · finish · ≈ 7.3 h
- ☐ Numerical Methods for Engineers · start · ≈ 2.2 h
- ☐ Reading: Mathematics for Machine Learning

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Derivatives, integrals, series and applications of single-variable calculus	☐	☐	☐	☐
Vectors, matrices, determinants, eigenvalues, orthogonality	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

36

YEAR 1 · S2 · WEEK 16/20 · ≈ 9.6 H

Numerical Methods for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Numerical Methods for Engineers · continued · ≈ 9.6 h
- ☐ Reading: Calculus, Volume 1

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Differential equations and vector calculus	☐	☐	☐	☐
Numerical methods and scientific programming in MATLAB	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

37

YEAR 1 · S2 · WEEK 17/20 · ≈ 9.6 H

Numerical Methods for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Numerical Methods for Engineers · continued · ≈ 9.6 h
- ☐ Reading: Introduction to Applied Linear Algebra: Vectors, Matrices, and Least Squares

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Derivatives, integrals, series and applications of single-variable calculus	☐	☐	☐	☐
Vectors, matrices, determinants, eigenvalues, orthogonality	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

38

YEAR 1 · S2 · WEEK 18/20 · ≈ 9.6 H

Numerical Methods for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Numerical Methods for Engineers · continued · ≈ 9.5 h
- ☐ Reading: Mathematics for Machine Learning

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Differential equations and vector calculus	☐	☐	☐	☐
Numerical methods and scientific programming in MATLAB	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

39

YEAR 1 · S2 · WEEK 19/20 · ≈ 9.6 H

Numerical Methods for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Numerical Methods for Engineers · finish · ≈ 9.1 h
- ☐ Mathematics for Engineers: The Capstone Course · start · ≈ 0.5 h
- ☐ **Semester project**: The Mathematics for Engineers capstone: numerical computation of the flow past a cylinder (Kármán vortex street).
- ☐ Reading: Calculus, Volume 1

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Derivatives, integrals, series and applications of single-variable calculus	☐	☐	☐	☐
Vectors, matrices, determinants, eigenvalues, orthogonality	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

40

YEAR 1 · S2 · WEEK 20/20 · ≈ 9.6 H

Mathematics for Engineers: The Capstone Course

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Mathematics for Engineers: The Capstone Course · finish · ≈ 9.5 h
- ☐ **Semester project**: The Mathematics for Engineers capstone: numerical computation of the flow past a cylinder (Kármán vortex street).
- ☐ Reading: Introduction to Applied Linear Algebra: Vectors, Matrices, and Least Squares

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Differential equations and vector calculus	☐	☐	☐	☐
Numerical methods and scientific programming in MATLAB	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

S3

YEAR 2 · THEORETICAL COMPUTER SCIENCE AND STATISTICS · 173 H · ≈ 8.7 H PER WEEK

Discrete mathematics and algorithms

From ___ / ___ to ___ / ___

Learn to prove, count and reason about graphs, then design and analyze efficient algorithms.

SEMESTER PROGRAMME

Course	Length	Weeks	Done
Mathematical Thinking in Computer Science Introduction to Discrete Mathematics for Computer Science	42 h	W. 1–5	☐
Combinatorics and Probability Introduction to Discrete Mathematics for Computer Science	23 h	W. 5–8	☐
Introduction to Graph Theory Introduction to Discrete Mathematics for Computer Science	21 h	W. 8–10	☐
Number Theory and Cryptography Introduction to Discrete Mathematics for Computer Science	17 h	W. 10–12	☐
Delivery Problem Introduction to Discrete Mathematics for Computer Science	13 h	W. 12–14	☐
Divide and Conquer, Sorting and Searching, and Randomized Algorithms Algorithms Specialization	15 h	W. 14–16	☐
Graph Search, Shortest Paths, and Data Structures Algorithms Specialization	14 h	W. 16–17	☐
Greedy Algorithms, Minimum Spanning Trees, and Dynamic Programming Algorithms Specialization	15 h	W. 17–19	☐
Shortest Paths Revisited, NP-Complete Problems and What To Do About Them Algorithms Specialization	13 h	W. 19–20	☐

TARGET SKILLS

- ☐ Proof by induction, by contradiction, invariants
- ☐ Combinatorics, discrete probability, graph theory
- ☐ Modular arithmetic and RSA cryptography
- ☐ Divide and conquer, graphs, greedy algorithms, dynamic programming, NP-completeness

SEMESTER PROJECT

The UCSD Delivery Problem project: solve a travelling salesman problem and compare heuristics.

Signed off on ___ / ___ / _____

READING

- ☐ Mathematics for Computer Science
- ☐ Algorithms

MY GOAL FOR THIS SEMESTER

41

YEAR 2 · S3 · WEEK 1/20 · ≈ 8.7 H

Mathematical Thinking in Computer Science

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Mathematical Thinking in Computer Science · start · ≈ 8.7 h
- ☐ Reading: Mathematics for Computer Science

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Proof by induction, by contradiction, invariants	☐	☐	☐	☐
Combinatorics, discrete probability, graph theory	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 8.7 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

42

YEAR 2 · S3 · WEEK 2/20 · ≈ 8.7 H

Mathematical Thinking in Computer Science

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Mathematical Thinking in Computer Science · continued · ≈ 8.7 h
- ☐ Reading: Algorithms

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Modular arithmetic and RSA cryptography	☐	☐	☐	☐
Divide and conquer, graphs, greedy algorithms, dynamic programming, NP-completeness	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 8.7 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

43

YEAR 2 · S3 · WEEK 3/20 · ≈ 8.7 H

Mathematical Thinking in Computer Science

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Mathematical Thinking in Computer Science · continued · ≈ 8.7 h
- ☐ Reading: Mathematics for Computer Science

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Proof by induction, by contradiction, invariants	☐	☐	☐	☐
Combinatorics, discrete probability, graph theory	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 8.7 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

44

YEAR 2 · S3 · WEEK 4/20 · ≈ 8.7 H

Mathematical Thinking in Computer Science

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Mathematical Thinking in Computer Science · continued · ≈ 8.6 h
- ☐ Reading: Algorithms

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Modular arithmetic and RSA cryptography	☐	☐	☐	☐
Divide and conquer, graphs, greedy algorithms, dynamic programming, NP-completeness	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 8.7 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

45 Mathematical Thinking in Computer Science

YEAR 2 · S3 · WEEK 5/20 · ≈ 8.7 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Mathematical Thinking in Computer Science · finish · ≈ 7.4 h
- ☐ Combinatorics and Probability · start · ≈ 1.2 h
- ☐ Reading: Mathematics for Computer Science

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Proof by induction, by contradiction, invariants	☐	☐	☐	☐
Combinatorics, discrete probability, graph theory	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 8.7 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

46

YEAR 2 · S3 · WEEK 6/20 · ≈ 8.7 H

Combinatorics and Probability

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Combinatorics and Probability · continued · ≈ 8.7 h
- ☐ Reading: Algorithms

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Modular arithmetic and RSA cryptography	☐	☐	☐	☐
Divide and conquer, graphs, greedy algorithms, dynamic programming, NP-completeness	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 8.7 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

47

YEAR 2 · S3 · WEEK 7/20 · ≈ 8.7 H

Combinatorics and Probability

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Combinatorics and Probability · continued · ≈ 8.6 h
- ☐ Reading: Mathematics for Computer Science

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Proof by induction, by contradiction, invariants	☐	☐	☐	☐
Combinatorics, discrete probability, graph theory	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 8.7 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

48

YEAR 2 · S3 · WEEK 8/20 · ≈ 8.7 H

Combinatorics and Probability

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Combinatorics and Probability · finish · ≈ 4.4 h
- ☐ Introduction to Graph Theory · start · ≈ 4.2 h
- ☐ Reading: Algorithms

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Modular arithmetic and RSA cryptography	☐	☐	☐	☐
Divide and conquer, graphs, greedy algorithms, dynamic programming, NP-completeness	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 8.7 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

49

YEAR 2 · S3 · WEEK 9/20 · ≈ 8.7 H

Introduction to Graph Theory

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Introduction to Graph Theory · continued · ≈ 8.7 h
- ☐ Reading: Mathematics for Computer Science

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Proof by induction, by contradiction, invariants	☐	☐	☐	☐
Combinatorics, discrete probability, graph theory	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 8.7 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

50

YEAR 2 · S3 · WEEK 10/20 · ≈ 8.7 H

Introduction to Graph Theory

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Introduction to Graph Theory · finish · ≈ 8.1 h
- ☐ Number Theory and Cryptography · start · ≈ 0.5 h
- ☐ Reading: Algorithms

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Modular arithmetic and RSA cryptography	☐	☐	☐	☐
Divide and conquer, graphs, greedy algorithms, dynamic programming, NP-completeness	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 8.7 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

51

YEAR 2 · S3 · WEEK 11/20 · ≈ 8.7 H

Number Theory and Cryptography

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Number Theory and Cryptography · continued · ≈ 8.7 h
- ☐ Reading: Mathematics for Computer Science

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Proof by induction, by contradiction, invariants	☐	☐	☐	☐
Combinatorics, discrete probability, graph theory	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 8.7 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

52

YEAR 2 · S3 · WEEK 12/20 · ≈ 8.7 H

Number Theory and Cryptography

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Number Theory and Cryptography · finish · ≈ 7.8 h
- ☐ Delivery Problem · start · ≈ 0.8 h
- ☐ Reading: Algorithms

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Modular arithmetic and RSA cryptography	☐	☐	☐	☐
Divide and conquer, graphs, greedy algorithms, dynamic programming, NP-completeness	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 8.7 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

53

YEAR 2 · S3 · WEEK 13/20 · ≈ 8.7 H

Delivery Problem

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Delivery Problem · continued · ≈ 8.6 h
- ☐ Reading: Mathematics for Computer Science

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Proof by induction, by contradiction, invariants	☐	☐	☐	☐
Combinatorics, discrete probability, graph theory	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 8.7 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

54

YEAR 2 · S3 · WEEK 14/20 · ≈ 8.7 H

Delivery Problem

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Delivery Problem · finish · ≈ 3.5 h
- ☐ Divide and Conquer, Sorting and Searching, and Randomized Algorithms · start · ≈ 5.1 h
- ☐ Reading: Algorithms

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Modular arithmetic and RSA cryptography	☐	☐	☐	☐
Divide and conquer, graphs, greedy algorithms, dynamic programming, NP-completeness	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 8.7 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

55

YEAR 2 · S3 · WEEK 15/20 · ≈ 8.7 H

Divide and Conquer, Sorting and Searching, and Randomized Algorithms

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Divide and Conquer, Sorting and Searching, and Randomized Algorithms · continued · ≈ 8.6 h
- ☐ Reading: Mathematics for Computer Science

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Proof by induction, by contradiction, invariants	☐	☐	☐	☐
Combinatorics, discrete probability, graph theory	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 8.7 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

56

YEAR 2 · S3 · WEEK 16/20 · ≈ 8.7 H

Divide and Conquer, Sorting and Searching, and Randomized Algorithms

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Divide and Conquer, Sorting and Searching, and Randomized Algorithms · finish · ≈ 1.2 h
- ☐ Graph Search, Shortest Paths, and Data Structures · start · ≈ 7.4 h
- ☐ Reading: Algorithms

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Modular arithmetic and RSA cryptography	☐	☐	☐	☐
Divide and conquer, graphs, greedy algorithms, dynamic programming, NP-completeness	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 8.7 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

57

YEAR 2 · S3 · WEEK 17/20 · ≈ 8.7 H

Graph Search, Shortest Paths, and Data Structures

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Graph Search, Shortest Paths, and Data Structures · finish · ≈ 6.6 h
- ☐ Greedy Algorithms, Minimum Spanning Trees, and Dynamic Programming · start · ≈ 2.1 h
- ☐ Reading: Mathematics for Computer Science

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Proof by induction, by contradiction, invariants	☐	☐	☐	☐
Combinatorics, discrete probability, graph theory	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 8.7 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

58

YEAR 2 · S3 · WEEK 18/20 · ≈ 8.7 H

Greedy Algorithms, Minimum Spanning Trees, and Dynamic Programming

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Greedy Algorithms, Minimum Spanning Trees, and Dynamic Programming · continued · ≈ 8.7 h
- ☐ Reading: Algorithms

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Modular arithmetic and RSA cryptography	☐	☐	☐	☐
Divide and conquer, graphs, greedy algorithms, dynamic programming, NP-completeness	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 8.7 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

59

YEAR 2 · S3 · WEEK 19/20 · ≈ 8.7 H

Greedy Algorithms, Minimum Spanning Trees, and Dynamic Programming

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Greedy Algorithms, Minimum Spanning Trees, and Dynamic Programming · finish · ≈ 4.3 h
- ☐ Shortest Paths Revisited, NP-Complete Problems and What To Do About Them · start · ≈ 4.3 h
- ☐ **Semester project**: The UCSD Delivery Problem project: solve a travelling salesman problem and compare heuristics.
- ☐ Reading: Mathematics for Computer Science

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Proof by induction, by contradiction, invariants	☐	☐	☐	☐
Combinatorics, discrete probability, graph theory	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 8.7 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

60

YEAR 2 · S3 · WEEK 20/20 · ≈ 8.7 H

Shortest Paths Revisited, NP-Complete Problems and What To Do About Them

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Shortest Paths Revisited, NP-Complete Problems and What To Do About Them · finish · ≈ 8.7 h
- ☐ **Semester project**: The UCSD Delivery Problem project: solve a travelling salesman problem and compare heuristics.
- ☐ Reading: Algorithms

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Modular arithmetic and RSA cryptography	☐	☐	☐	☐
Divide and conquer, graphs, greedy algorithms, dynamic programming, NP-completeness	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 8.7 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

S4

YEAR 2 · THEORETICAL COMPUTER SCIENCE AND STATISTICS · 269 H · ≈ 13.4 H PER WEEK

Probability and statistical modeling

From ___ / ___ to ___ / ___

Build a solid probabilistic foundation, then learn to estimate, test and model.

SEMESTER PROGRAMME

Course	Length	Weeks	Done
Probability Foundations for Data Science and AI Foundations of Probability and Statistics	43 h	W. 1–4	☐
Discrete-Time Markov Chains and Monte Carlo Methods Foundations of Probability and Statistics	33 h	W. 4–6	☐
Statistical Estimation for Data Science and AI Foundations of Probability and Statistics	29 h	W. 6–8	☐
Statistical Inference and Hypothesis Testing in Data Science Applications Statistical Inference and Hypothesis Testing in Data Science Applications	37 h	W. 8–11	☐
Modern Regression Analysis in R Statistical Modeling for Data Science Applications	45 h	W. 11–14	☐
ANOVA and Experimental Design Statistical Modeling for Data Science Applications	40 h	W. 14–17	☐
Generalized Linear Models and Nonparametric Regression Statistical Modeling for Data Science Applications	42 h	W. 17–20	☐

TARGET SKILLS

- ☐ Random variables, common distributions, limit theorems
- ☐ Discrete-time Markov chains and Monte Carlo methods
- ☐ Estimation, confidence intervals, hypothesis tests
- ☐ Linear regression, ANOVA, experimental design, generalized linear models

SEMESTER PROJECT

A complete study in R: frame a question, fit a linear model or GLM, check the residuals and write a reproducible report.

Signed off on ___ / ___ / _____

READING

- ☐ Introduction to Probability, 2nd edition
- ☐ R for Data Science, 2nd edition

MY GOAL FOR THIS SEMESTER

61

YEAR 2 · S4 · WEEK 1/20 · ≈ 13.4 H

Probability Foundations for Data Science and AI

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Probability Foundations for Data Science and AI · start · ≈ 13.4 h
- ☐ Reading: Introduction to Probability, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Random variables, common distributions, limit theorems	☐	☐	☐	☐
Discrete-time Markov chains and Monte Carlo methods	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.4 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

62

YEAR 2 · S4 · WEEK 2/20 · ≈ 13.4 H

Probability Foundations for Data Science and AI

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Probability Foundations for Data Science and AI · continued · ≈ 13.4 h
- ☐ Reading: R for Data Science, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Estimation, confidence intervals, hypothesis tests	☐	☐	☐	☐
Linear regression, ANOVA, experimental design, generalized linear models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.4 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

63

YEAR 2 · S4 · WEEK 3/20 · ≈ 13.4 H

Probability Foundations for Data Science and AI

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Probability Foundations for Data Science and AI · continued · ≈ 13.4 h
- ☐ Reading: Introduction to Probability, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Random variables, common distributions, limit theorems	☐	☐	☐	☐
Discrete-time Markov chains and Monte Carlo methods	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.4 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

64

YEAR 2 · S4 · WEEK 4/20 · ≈ 13.4 H

Probability Foundations for Data Science and AI

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Probability Foundations for Data Science and AI · finish · ≈ 2.7 h
- ☐ Discrete-Time Markov Chains and Monte Carlo Methods · start · ≈ 10.8 h
- ☐ Reading: R for Data Science, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Estimation, confidence intervals, hypothesis tests	☐	☐	☐	☐
Linear regression, ANOVA, experimental design, generalized linear models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.4 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

65

YEAR 2 · S4 · WEEK 5/20 · ≈ 13.4 H

Discrete-Time Markov Chains and Monte Carlo Methods

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Discrete-Time Markov Chains and Monte Carlo Methods · continued · ≈ 13.5 h
- ☐ Reading: Introduction to Probability, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Random variables, common distributions, limit theorems	☐	☐	☐	☐
Discrete-time Markov chains and Monte Carlo methods	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.4 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

66

YEAR 2 · S4 · WEEK 6/20 · ≈ 13.4 H

Discrete-Time Markov Chains and Monte Carlo Methods

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Discrete-Time Markov Chains and Monte Carlo Methods · finish · ≈ 8.8 h
- ☐ Statistical Estimation for Data Science and AI · start · ≈ 4.7 h
- ☐ Reading: R for Data Science, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Estimation, confidence intervals, hypothesis tests	☐	☐	☐	☐
Linear regression, ANOVA, experimental design, generalized linear models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.4 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

67

YEAR 2 · S4 · WEEK 7/20 · ≈ 13.4 H

Statistical Estimation for Data Science and AI

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Statistical Estimation for Data Science and AI · continued · ≈ 13.5 h
- ☐ Reading: Introduction to Probability, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Random variables, common distributions, limit theorems	☐	☐	☐	☐
Discrete-time Markov chains and Monte Carlo methods	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.4 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

68

YEAR 2 · S4 · WEEK 8/20 · ≈ 13.4 H

Statistical Estimation for Data Science and AI

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Statistical Estimation for Data Science and AI · finish · ≈ 10.9 h
- ☐ Statistical Inference and Hypothesis Testing in Data Science Applications · start · ≈ 2.6 h
- ☐ Reading: R for Data Science, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Estimation, confidence intervals, hypothesis tests	☐	☐	☐	☐
Linear regression, ANOVA, experimental design, generalized linear models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.4 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

69

YEAR 2 · S4 · WEEK 9/20 · ≈ 13.4 H

Statistical Inference and Hypothesis Testing in Data Science Applications

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Statistical Inference and Hypothesis Testing in Data Science Applications · continued · ≈ 13.5 h
- ☐ Reading: Introduction to Probability, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Random variables, common distributions, limit theorems	☐	☐	☐	☐
Discrete-time Markov chains and Monte Carlo methods	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.4 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

70

YEAR 2 · S4 · WEEK 10/20 · ≈ 13.4 H

Statistical Inference and Hypothesis Testing in Data Science Applications

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Statistical Inference and Hypothesis Testing in Data Science Applications · continued · ≈ 13.5 h
- ☐ Reading: R for Data Science, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Estimation, confidence intervals, hypothesis tests	☐	☐	☐	☐
Linear regression, ANOVA, experimental design, generalized linear models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.4 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

71

YEAR 2 · S4 · WEEK 11/20 · ≈ 13.4 H

Statistical Inference and Hypothesis Testing in Data Science Applications

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Statistical Inference and Hypothesis Testing in Data Science Applications · finish · ≈ 7.5 h
- ☐ Modern Regression Analysis in R · start · ≈ 5.9 h
- ☐ Reading: Introduction to Probability, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Random variables, common distributions, limit theorems	☐	☐	☐	☐
Discrete-time Markov chains and Monte Carlo methods	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.4 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

72

YEAR 2 · S4 · WEEK 12/20 · ≈ 13.4 H

Modern Regression Analysis in R

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Modern Regression Analysis in R · continued · ≈ 13.4 h
- ☐ Reading: R for Data Science, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Estimation, confidence intervals, hypothesis tests	☐	☐	☐	☐
Linear regression, ANOVA, experimental design, generalized linear models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.4 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

73

YEAR 2 · S4 · WEEK 13/20 · ≈ 13.4 H

Modern Regression Analysis in R

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Modern Regression Analysis in R · continued · ≈ 13.5 h
- ☐ Reading: Introduction to Probability, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Random variables, common distributions, limit theorems	☐	☐	☐	☐
Discrete-time Markov chains and Monte Carlo methods	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.4 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

74

YEAR 2 · S4 · WEEK 14/20 · ≈ 13.4 H

Modern Regression Analysis in R

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Modern Regression Analysis in R · finish · ≈ 12.2 h
- ☐ ANOVA and Experimental Design · start · ≈ 1.3 h
- ☐ Reading: R for Data Science, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Estimation, confidence intervals, hypothesis tests	☐	☐	☐	☐
Linear regression, ANOVA, experimental design, generalized linear models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.4 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

75

YEAR 2 · S4 · WEEK 15/20 · ≈ 13.4 H

ANOVA and Experimental Design

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ ANOVA and Experimental Design · continued · ≈ 13.5 h
- ☐ Reading: Introduction to Probability, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Random variables, common distributions, limit theorems	☐	☐	☐	☐
Discrete-time Markov chains and Monte Carlo methods	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.4 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

76

YEAR 2 · S4 · WEEK 16/20 · ≈ 13.4 H

ANOVA and Experimental Design

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ ANOVA and Experimental Design · continued · ≈ 13.4 h
- ☐ Reading: R for Data Science, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Estimation, confidence intervals, hypothesis tests	☐	☐	☐	☐
Linear regression, ANOVA, experimental design, generalized linear models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.4 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

77

YEAR 2 · S4 · WEEK 17/20 · ≈ 13.4 H

ANOVA and Experimental Design

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ ANOVA and Experimental Design · finish · ≈ 11.8 h
- ☐ Generalized Linear Models and Nonparametric Regression · start · ≈ 1.6 h
- ☐ Reading: Introduction to Probability, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Random variables, common distributions, limit theorems	☐	☐	☐	☐
Discrete-time Markov chains and Monte Carlo methods	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.4 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

78 Generalized Linear Models and Nonparametric Regression

YEAR 2 · S4 · WEEK 18/20 · ≈ 13.4 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Generalized Linear Models and Nonparametric Regression · continued · ≈ 13.5 h
- ☐ Reading: R for Data Science, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Estimation, confidence intervals, hypothesis tests	☐	☐	☐	☐
Linear regression, ANOVA, experimental design, generalized linear models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.4 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

79

YEAR 2 · S4 · WEEK 19/20 · ≈ 13.4 H

Generalized Linear Models and Nonparametric Regression

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Generalized Linear Models and Nonparametric Regression · continued · ≈ 13.4 h
- ☐ **Semester project**: A complete study in R: frame a question, fit a linear model or GLM, check the residuals and write a reproducible report.
- ☐ Reading: Introduction to Probability, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Random variables, common distributions, limit theorems	☐	☐	☐	☐
Discrete-time Markov chains and Monte Carlo methods	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.4 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

80

YEAR 2 · S4 · WEEK 20/20 · ≈ 13.4 H

Generalized Linear Models and Nonparametric Regression

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Generalized Linear Models and Nonparametric Regression · finish · ≈ 13.5 h
- ☐ **Semester project**: A complete study in R: frame a question, fit a linear model or GLM, check the residuals and write a reproducible report.
- ☐ Reading: R for Data Science, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Estimation, confidence intervals, hypothesis tests	☐	☐	☐	☐
Linear regression, ANOVA, experimental design, generalized linear models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.4 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

S5

YEAR 3 · DATA, MACHINE LEARNING AND AI · 191 H · ≈ 9.6 H PER WEEK

Data and machine learning

From ___ / ___ to ___ / ___

Prepare real-world data at scale in Python, then train and evaluate supervised and unsupervised models.

SEMESTER PROGRAMME

Course	Length	Weeks	Done
Fundamental Tools of Data Wrangling Data Wrangling with Python	27 h	W. 1–3	☐
Data Collection and Integration Data Wrangling with Python	28 h	W. 3–6	☐
Data Understanding and Visualization Data Wrangling with Python	25 h	W. 6–9	☐
Data Processing and Manipulation Data Wrangling with Python	29 h	W. 9–12	☐
Data Wrangling with Python Project Data Wrangling with Python	26 h	W. 12–15	☐
Introduction to Machine Learning: Supervised Learning Machine Learning: Theory and Hands-on Practice with Python	23 h	W. 15–17	☐
Introduction to Machine Learning: Unsupervised Learning Machine Learning: Theory and Hands-on Practice with Python	15 h	W. 17–19	☐
Introduction to Deep Learning Machine Learning: Theory and Hands-on Practice with Python	18 h	W. 19–20	☐

TARGET SKILLS

- ☐ Collecting, integrating, cleaning and transforming data with pandas
- ☐ Exploratory visualization with Matplotlib and Seaborn
- ☐ Trees, regressions, SVMs, ensemble methods, cross-validation
- ☐ Clustering, dimensionality reduction, introduction to deep learning

SEMESTER PROJECT

The Data Wrangling with Python final project, then a complete predictive model on the same data.

Signed off on ___ / ___ / _____

READING

- ☐ Python for Data Analysis, 3rd edition
- ☐ An Introduction to Statistical Learning, with Applications in Python
- ☐ Mathematics for Machine Learning (Part II)

MY GOAL FOR THIS SEMESTER

81

YEAR 3 · S5 · WEEK 1/20 · ≈ 9.6 H

Fundamental Tools of Data Wrangling

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Fundamental Tools of Data Wrangling · start · ≈ 9.6 h
- ☐ Reading: Python for Data Analysis, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Collecting, integrating, cleaning and transforming data with pandas	☐	☐	☐	☐
Exploratory visualization with Matplotlib and Seaborn	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

82

YEAR 3 · S5 · WEEK 2/20 · ≈ 9.6 H

Fundamental Tools of Data Wrangling

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Fundamental Tools of Data Wrangling · continued · ≈ 9.6 h
- ☐ Reading: An Introduction to Statistical Learning, with Applications in Python

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Trees, regressions, SVMs, ensemble methods, cross-validation	☐	☐	☐	☐
Clustering, dimensionality reduction, introduction to deep learning	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

83

YEAR 3 · S5 · WEEK 3/20 · ≈ 9.6 H

Fundamental Tools of Data Wrangling

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Fundamental Tools of Data Wrangling · finish · ≈ 7.9 h
- ☐ Data Collection and Integration · start · ≈ 1.7 h
- ☐ Reading: Mathematics for Machine Learning (Part II)

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Collecting, integrating, cleaning and transforming data with pandas	☐	☐	☐	☐
Exploratory visualization with Matplotlib and Seaborn	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

84

YEAR 3 · S5 · WEEK 4/20 · ≈ 9.6 H

Data Collection and Integration

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Data Collection and Integration · continued · ≈ 9.6 h
- ☐ Reading: Python for Data Analysis, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Trees, regressions, SVMs, ensemble methods, cross-validation	☐	☐	☐	☐
Clustering, dimensionality reduction, introduction to deep learning	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

85

YEAR 3 · S5 · WEEK 5/20 · ≈ 9.6 H

Data Collection and Integration

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Data Collection and Integration · continued · ≈ 9.5 h
- ☐ Reading: An Introduction to Statistical Learning, with Applications in Python

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Collecting, integrating, cleaning and transforming data with pandas	☐	☐	☐	☐
Exploratory visualization with Matplotlib and Seaborn	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

86

YEAR 3 · S5 · WEEK 6/20 · ≈ 9.6 H

Data Collection and Integration

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Data Collection and Integration · finish · ≈ 7.2 h
- ☐ Data Understanding and Visualization · start · ≈ 2.3 h
- ☐ Reading: Mathematics for Machine Learning (Part II)

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Trees, regressions, SVMs, ensemble methods, cross-validation	☐	☐	☐	☐
Clustering, dimensionality reduction, introduction to deep learning	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

87

YEAR 3 · S5 · WEEK 7/20 · ≈ 9.6 H

Data Understanding and Visualization

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Data Understanding and Visualization · continued · ≈ 9.6 h
- ☐ Reading: Python for Data Analysis, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Collecting, integrating, cleaning and transforming data with pandas	☐	☐	☐	☐
Exploratory visualization with Matplotlib and Seaborn	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

88

YEAR 3 · S5 · WEEK 8/20 · ≈ 9.6 H

Data Understanding and Visualization

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Data Understanding and Visualization · continued · ≈ 9.5 h
- ☐ Reading: An Introduction to Statistical Learning, with Applications in Python

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Trees, regressions, SVMs, ensemble methods, cross-validation	☐	☐	☐	☐
Clustering, dimensionality reduction, introduction to deep learning	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

89

YEAR 3 · S5 · WEEK 9/20 · ≈ 9.6 H

Data Understanding and Visualization

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Data Understanding and Visualization · finish · ≈ 3.6 h
- ☐ Data Processing and Manipulation · start · ≈ 6 h
- ☐ Reading: Mathematics for Machine Learning (Part II)

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Collecting, integrating, cleaning and transforming data with pandas	☐	☐	☐	☐
Exploratory visualization with Matplotlib and Seaborn	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

90

YEAR 3 · S5 · WEEK 10/20 · ≈ 9.6 H

Data Processing and Manipulation

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Data Processing and Manipulation · continued · ≈ 9.5 h
- ☐ Reading: Python for Data Analysis, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Trees, regressions, SVMs, ensemble methods, cross-validation	☐	☐	☐	☐
Clustering, dimensionality reduction, introduction to deep learning	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

91

YEAR 3 · S5 · WEEK 11/20 · ≈ 9.6 H

Data Processing and Manipulation

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Data Processing and Manipulation · continued · ≈ 9.6 h
- ☐ Reading: An Introduction to Statistical Learning, with Applications in Python

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Collecting, integrating, cleaning and transforming data with pandas	☐	☐	☐	☐
Exploratory visualization with Matplotlib and Seaborn	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

92

YEAR 3 · S5 · WEEK 12/20 · ≈ 9.6 H

Data Processing and Manipulation

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Data Processing and Manipulation · finish · ≈ 3.9 h
- ☐ Data Wrangling with Python Project · start · ≈ 5.6 h
- ☐ Reading: Mathematics for Machine Learning (Part II)

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Trees, regressions, SVMs, ensemble methods, cross-validation	☐	☐	☐	☐
Clustering, dimensionality reduction, introduction to deep learning	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

93

YEAR 3 · S5 · WEEK 13/20 · ≈ 9.6 H

Data Wrangling with Python Project

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Data Wrangling with Python Project · continued · ≈ 9.5 h
- ☐ Reading: Python for Data Analysis, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Collecting, integrating, cleaning and transforming data with pandas	☐	☐	☐	☐
Exploratory visualization with Matplotlib and Seaborn	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

94

YEAR 3 · S5 · WEEK 14/20 · ≈ 9.6 H

Data Wrangling with Python Project

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Data Wrangling with Python Project · continued · ≈ 9.6 h
- ☐ Reading: An Introduction to Statistical Learning, with Applications in Python

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Trees, regressions, SVMs, ensemble methods, cross-validation	☐	☐	☐	☐
Clustering, dimensionality reduction, introduction to deep learning	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

95

YEAR 3 · S5 · WEEK 15/20 · ≈ 9.6 H

Data Wrangling with Python Project

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Data Wrangling with Python Project · finish · ≈ 1.3 h
- ☐ Introduction to Machine Learning: Supervised Learning · start · ≈ 8.2 h
- ☐ Reading: Mathematics for Machine Learning (Part II)

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Collecting, integrating, cleaning and transforming data with pandas	☐	☐	☐	☐
Exploratory visualization with Matplotlib and Seaborn	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

96 Introduction to Machine Learning: Supervised Learning

YEAR 3 · S5 · WEEK 16/20 · ≈ 9.6 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Introduction to Machine Learning: Supervised Learning · continued · ≈ 9.6 h
- ☐ Reading: Python for Data Analysis, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Trees, regressions, SVMs, ensemble methods, cross-validation	☐	☐	☐	☐
Clustering, dimensionality reduction, introduction to deep learning	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

97

YEAR 3 · S5 · WEEK 17/20 · ≈ 9.6 H

Introduction to Machine Learning: Supervised Learning

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Introduction to Machine Learning: Supervised Learning · finish · ≈ 5.2 h
- ☐ Introduction to Machine Learning: Unsupervised Learning · start · ≈ 4.4 h
- ☐ Reading: An Introduction to Statistical Learning, with Applications in Python

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Collecting, integrating, cleaning and transforming data with pandas	☐	☐	☐	☐
Exploratory visualization with Matplotlib and Seaborn	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

98

YEAR 3 · S5 · WEEK 18/20 · ≈ 9.6 H

Introduction to Machine Learning: Unsupervised Learning

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Introduction to Machine Learning: Unsupervised Learning · continued · ≈ 9.5 h
- ☐ Reading: Mathematics for Machine Learning (Part II)

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Trees, regressions, SVMs, ensemble methods, cross-validation	☐	☐	☐	☐
Clustering, dimensionality reduction, introduction to deep learning	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

99

YEAR 3 · S5 · WEEK 19/20 · ≈ 9.6 H

Introduction to Machine Learning: Unsupervised Learning

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Introduction to Machine Learning: Unsupervised Learning · finish · ≈ 1.1 h
- ☐ Introduction to Deep Learning · start · ≈ 8.5 h
- ☐ **Semester project**: The Data Wrangling with Python final project, then a complete predictive model on the same data.
- ☐ Reading: Python for Data Analysis, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Collecting, integrating, cleaning and transforming data with pandas	☐	☐	☐	☐
Exploratory visualization with Matplotlib and Seaborn	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

100

YEAR 3 · S5 · WEEK 20/20 · ≈ 9.6 H

Introduction to Deep Learning

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Introduction to Deep Learning · finish · ≈ 9.5 h
- ☐ **Semester project**: The Data Wrangling with Python final project, then a complete predictive model on the same data.
- ☐ Reading: An Introduction to Statistical Learning, with Applications in Python

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Trees, regressions, SVMs, ensemble methods, cross-validation	☐	☐	☐	☐
Clustering, dimensionality reduction, introduction to deep learning	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

S6 Advanced AI

YEAR 3 · DATA, MACHINE LEARNING AND AI · 262 H · ≈ 13.1 H PER WEEK

From ___ / ___ to ___ / ___

Master the three main pillars of modern AI: Bayesian inference, deep neural networks and reinforcement learning.

SEMESTER PROGRAMME

Course	Length	Weeks	Done
Bayesian Statistics: From Concept to Data Analysis Bayesian Statistics	11 h	W. 1	☐
Bayesian Statistics: Techniques and Models Bayesian Statistics	30 h	W. 1–4	☐
Bayesian Statistics: Mixture Models Bayesian Statistics	22 h	W. 4–5	☐
Bayesian Statistics: Time Series Analysis Bayesian Statistics	19 h	W. 5–7	☐
Bayesian Statistics: Capstone Project Bayesian Statistics	12 h	W. 7–8	☐
Introduction to Neural Networks Foundations of Neural Networks	18 h	W. 8–9	☐
Advanced Neural Network Techniques Foundations of Neural Networks	11 h	W. 9–10	☐
Practical Methodology and Ethics in AI Foundations of Neural Networks	7 h	W. 10	☐
Deep Learning Deep Learning	57 h	W. 10–15	☐
Fundamentals of Reinforcement Learning Reinforcement Learning	15 h	W. 15–16	☐
Sample-based Learning Methods Reinforcement Learning	22 h	W. 16–18	☐
Prediction and Control with Function Approximation Reinforcement Learning	22 h	W. 18–19	☐
A Complete Reinforcement Learning System (Capstone) Reinforcement Learning	16 h	W. 19–20	☐

TARGET SKILLS

- ☐ Bayesian inference, MCMC, mixture models, time series
- ☐ Convolutional and recurrent networks, autoencoders, GANs
- ☐ Transfer learning and generative AI
- ☐ Markov decision processes, TD learning, Q-learning, policy gradient

SEMESTER PROJECT

Two capstones: Bayesian Statistics (a complete Bayesian analysis of a dataset) and A Complete Reinforcement Learning System (an end-to-end agent).

Signed off on ___ / ___ / _____

READING

- ☐ Bayesian Data Analysis, 3rd edition
- ☐ Deep Learning: Foundations and Concepts
- ☐ Deep Learning
- ☐ Reinforcement Learning: An Introduction, 2nd edition

MY GOAL FOR THIS SEMESTER

101 Bayesian Statistics: From Concept to Data Analysis

YEAR 3 · S6 · WEEK 1/20 · ≈ 13.1 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Bayesian Statistics: From Concept to Data Analysis · ≈ 11 h
- ☐ Bayesian Statistics: Techniques and Models · start · ≈ 2.1 h
- ☐ Reading: Bayesian Data Analysis, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Bayesian inference, MCMC, mixture models, time series	☐	☐	☐	☐
Convolutional and recurrent networks, autoencoders, GANs	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

102

YEAR 3 · S6 · WEEK 2/20 · ≈ 13.1 H

Bayesian Statistics: Techniques and Models

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Bayesian Statistics: Techniques and Models · continued · ≈ 13.1 h
- ☐ Reading: Deep Learning: Foundations and Concepts

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Transfer learning and generative AI	☐	☐	☐	☐
Markov decision processes, TD learning, Q-learning, policy gradient	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

103

YEAR 3 · S6 · WEEK 3/20 · ≈ 13.1 H

Bayesian Statistics: Techniques and Models

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Bayesian Statistics: Techniques and Models · continued · ≈ 13.1 h
- ☐ Reading: Deep Learning

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Bayesian inference, MCMC, mixture models, time series	☐	☐	☐	☐
Convolutional and recurrent networks, autoencoders, GANs	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

104

YEAR 3 · S6 · WEEK 4/20 · ≈ 13.1 H

Bayesian Statistics: Techniques and Models

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Bayesian Statistics: Techniques and Models · finish · ≈ 1.7 h
- ☐ Bayesian Statistics: Mixture Models · start · ≈ 11.4 h
- ☐ Reading: Reinforcement Learning: An Introduction, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Transfer learning and generative AI	☐	☐	☐	☐
Markov decision processes, TD learning, Q-learning, policy gradient	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

105

YEAR 3 · S6 · WEEK 5/20 · ≈ 13.1 H

Bayesian Statistics: Mixture Models

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Bayesian Statistics: Mixture Models · finish · ≈ 10.6 h
- ☐ Bayesian Statistics: Time Series Analysis · start · ≈ 2.5 h
- ☐ Reading: Bayesian Data Analysis, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Bayesian inference, MCMC, mixture models, time series	☐	☐	☐	☐
Convolutional and recurrent networks, autoencoders, GANs	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

106

YEAR 3 · S6 · WEEK 6/20 · ≈ 13.1 H

Bayesian Statistics: Time Series Analysis

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Bayesian Statistics: Time Series Analysis · continued · ≈ 13.1 h
- ☐ Reading: Deep Learning: Foundations and Concepts

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Transfer learning and generative AI	☐	☐	☐	☐
Markov decision processes, TD learning, Q-learning, policy gradient	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

107

YEAR 3 · S6 · WEEK 7/20 · ≈ 13.1 H

Bayesian Statistics: Time Series Analysis

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Bayesian Statistics: Time Series Analysis · finish · ≈ 3.4 h
- ☐ Bayesian Statistics: Capstone Project · start · ≈ 9.7 h
- ☐ Reading: Deep Learning

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Bayesian inference, MCMC, mixture models, time series	☐	☐	☐	☐
Convolutional and recurrent networks, autoencoders, GANs	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

108

YEAR 3 · S6 · WEEK 8/20 · ≈ 13.1 H

Bayesian Statistics: Capstone Project

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Bayesian Statistics: Capstone Project · finish · ≈ 2.3 h
- ☐ Introduction to Neural Networks · start · ≈ 10.8 h
- ☐ Reading: Reinforcement Learning: An Introduction, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Transfer learning and generative AI	☐	☐	☐	☐
Markov decision processes, TD learning, Q-learning, policy gradient	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

109

YEAR 3 · S6 · WEEK 9/20 · ≈ 13.1 H

Introduction to Neural Networks

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Introduction to Neural Networks · finish · ≈ 7.2 h
- ☐ Advanced Neural Network Techniques · start · ≈ 5.9 h
- ☐ Reading: Bayesian Data Analysis, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Bayesian inference, MCMC, mixture models, time series	☐	☐	☐	☐
Convolutional and recurrent networks, autoencoders, GANs	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

110

YEAR 3 · S6 · WEEK 10/20 · ≈ 13.1 H

Advanced Neural Network Techniques

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Advanced Neural Network Techniques · finish · ≈ 5.1 h
- ☐ Practical Methodology and Ethics in AI · ≈ 7 h
- ☐ Deep Learning · start · ≈ 1 h
- ☐ Reading: Deep Learning: Foundations and Concepts

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Transfer learning and generative AI	☐	☐	☐	☐
Markov decision processes, TD learning, Q-learning, policy gradient	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

111

YEAR 3 · S6 · WEEK 11/20 · ≈ 13.1 H

Deep Learning

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Deep Learning · continued · ≈ 13.1 h
- ☐ Reading: Deep Learning

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Bayesian inference, MCMC, mixture models, time series	☐	☐	☐	☐
Convolutional and recurrent networks, autoencoders, GANs	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

112

YEAR 3 · S6 · WEEK 12/20 · ≈ 13.1 H

Deep Learning

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Deep Learning · continued · ≈ 13.1 h
- ☐ Reading: Reinforcement Learning: An Introduction, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Transfer learning and generative AI	☐	☐	☐	☐
Markov decision processes, TD learning, Q-learning, policy gradient	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

113

YEAR 3 · S6 · WEEK 13/20 · ≈ 13.1 H

Deep Learning

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Deep Learning · continued · ≈ 13.1 h
- ☐ Reading: Bayesian Data Analysis, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Bayesian inference, MCMC, mixture models, time series	☐	☐	☐	☐
Convolutional and recurrent networks, autoencoders, GANs	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

114

YEAR 3 · S6 · WEEK 14/20 · ≈ 13.1 H

Deep Learning

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Deep Learning · continued · ≈ 13.1 h
- ☐ Reading: Deep Learning: Foundations and Concepts

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Transfer learning and generative AI	☐	☐	☐	☐
Markov decision processes, TD learning, Q-learning, policy gradient	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

115

YEAR 3 · S6 · WEEK 15/20 · ≈ 13.1 H

Deep Learning

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Deep Learning · finish · ≈ 3.6 h
- ☐ Fundamentals of Reinforcement Learning · start · ≈ 9.5 h
- ☐ Reading: Deep Learning

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Bayesian inference, MCMC, mixture models, time series	☐	☐	☐	☐
Convolutional and recurrent networks, autoencoders, GANs	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

116

YEAR 3 · S6 · WEEK 16/20 · ≈ 13.1 H

Fundamentals of Reinforcement Learning

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Fundamentals of Reinforcement Learning · finish · ≈ 5.5 h
- ☐ Sample-based Learning Methods · start · ≈ 7.6 h
- ☐ Reading: Reinforcement Learning: An Introduction, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Transfer learning and generative AI	☐	☐	☐	☐
Markov decision processes, TD learning, Q-learning, policy gradient	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

117

YEAR 3 · S6 · WEEK 17/20 · ≈ 13.1 H

Sample-based Learning Methods

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Sample-based Learning Methods · continued · ≈ 13.1 h
- ☐ Reading: Bayesian Data Analysis, 3rd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Bayesian inference, MCMC, mixture models, time series	☐	☐	☐	☐
Convolutional and recurrent networks, autoencoders, GANs	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

118

YEAR 3 · S6 · WEEK 18/20 · ≈ 13.1 H

Sample-based Learning Methods

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Sample-based Learning Methods · finish · ≈ 1.3 h
- ☐ Prediction and Control with Function Approximation · start · ≈ 11.8 h
- ☐ Reading: Deep Learning: Foundations and Concepts

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Transfer learning and generative AI	☐	☐	☐	☐
Markov decision processes, TD learning, Q-learning, policy gradient	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

119 Prediction and Control with Function Approximation

YEAR 3 · S6 · WEEK 19/20 · ≈ 13.1 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Prediction and Control with Function Approximation · finish · ≈ 10.2 h
- ☐ A Complete Reinforcement Learning System (Capstone) · start · ≈ 2.9 h
- ☐ **Semester project**: Two capstones: Bayesian Statistics (a complete Bayesian analysis of a dataset) and A Complete Reinforcement Learning System (an end-to-end agent).
- ☐ Reading: Deep Learning

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Bayesian inference, MCMC, mixture models, time series	☐	☐	☐	☐
Convolutional and recurrent networks, autoencoders, GANs	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

120 A Complete Reinforcement Learning System (Capstone)

YEAR 3 · S6 · WEEK 20/20 · ≈ 13.1 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ A Complete Reinforcement Learning System (Capstone) · finish · ≈ 13.1 h
- ☐ **Semester project**: Two capstones: Bayesian Statistics (a complete Bayesian analysis of a dataset) and A Complete Reinforcement Learning System (an end-to-end agent).
- ☐ Reading: Reinforcement Learning: An Introduction, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Transfer learning and generative AI	☐	☐	☐	☐
Markov decision processes, TD learning, Q-learning, policy gradient	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 13.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____