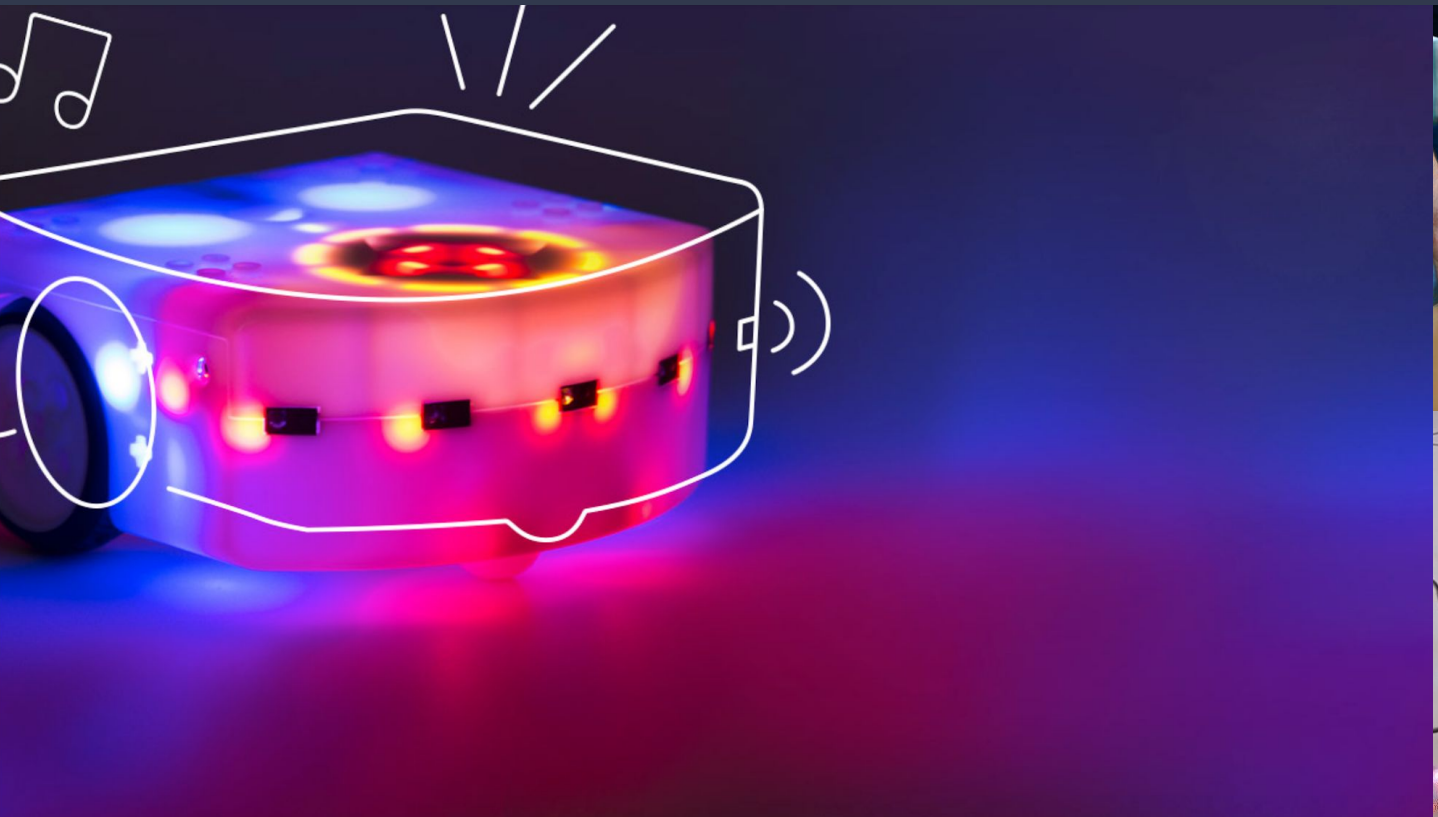
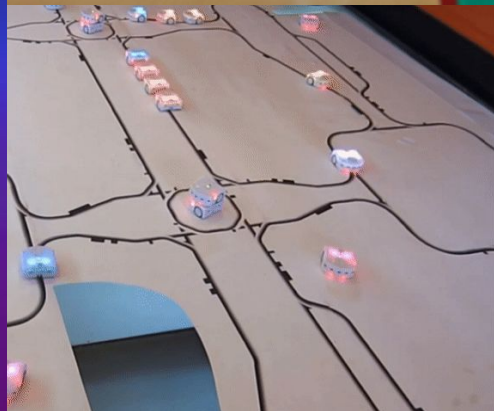
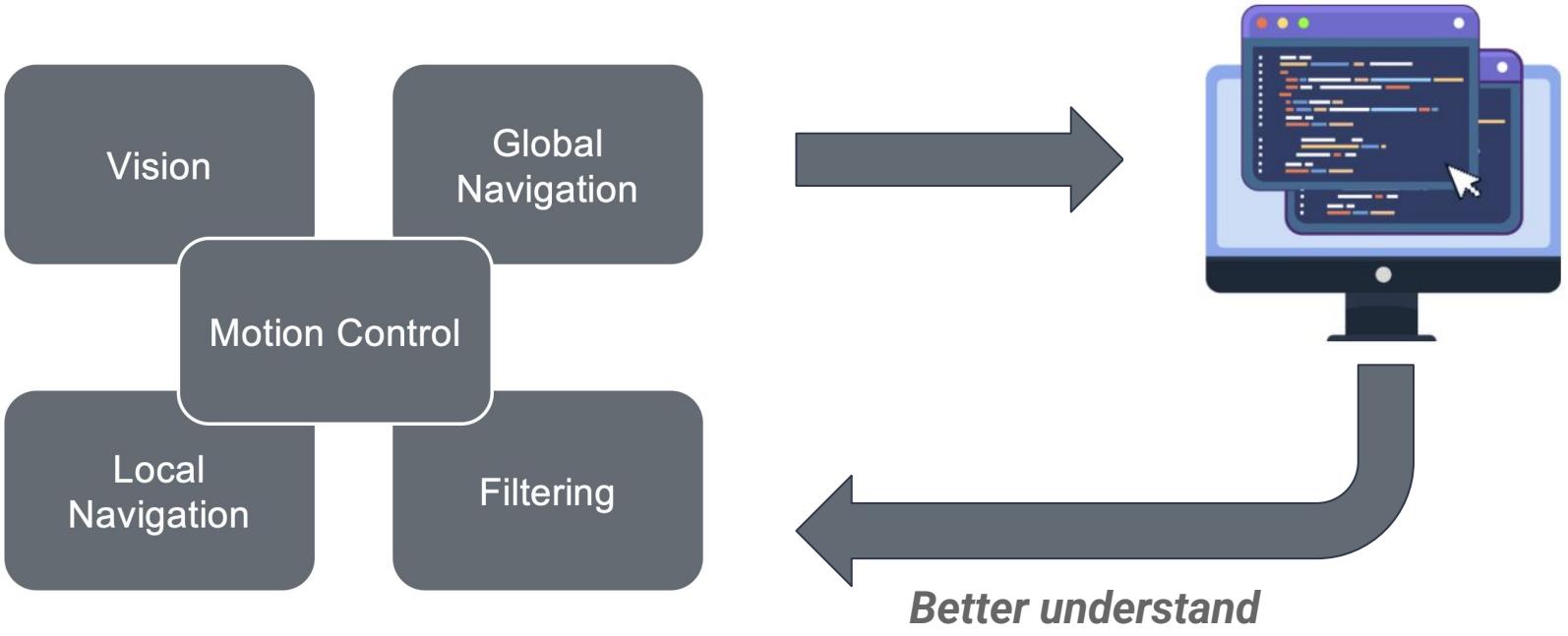
Welcome to the exercise session !





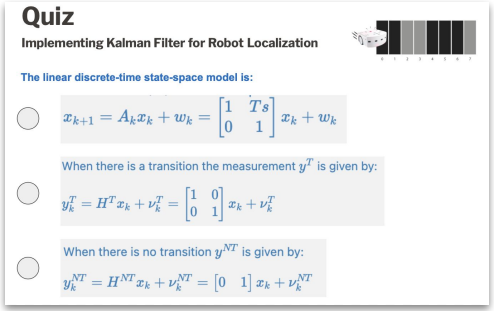
Implementing for better learning

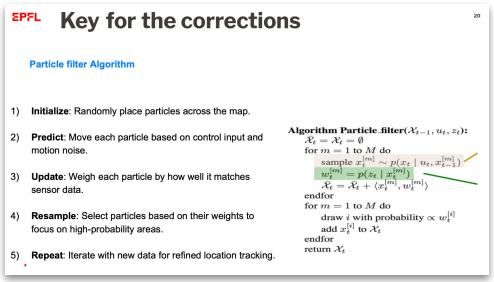


Exercise sessions - why is it important ?

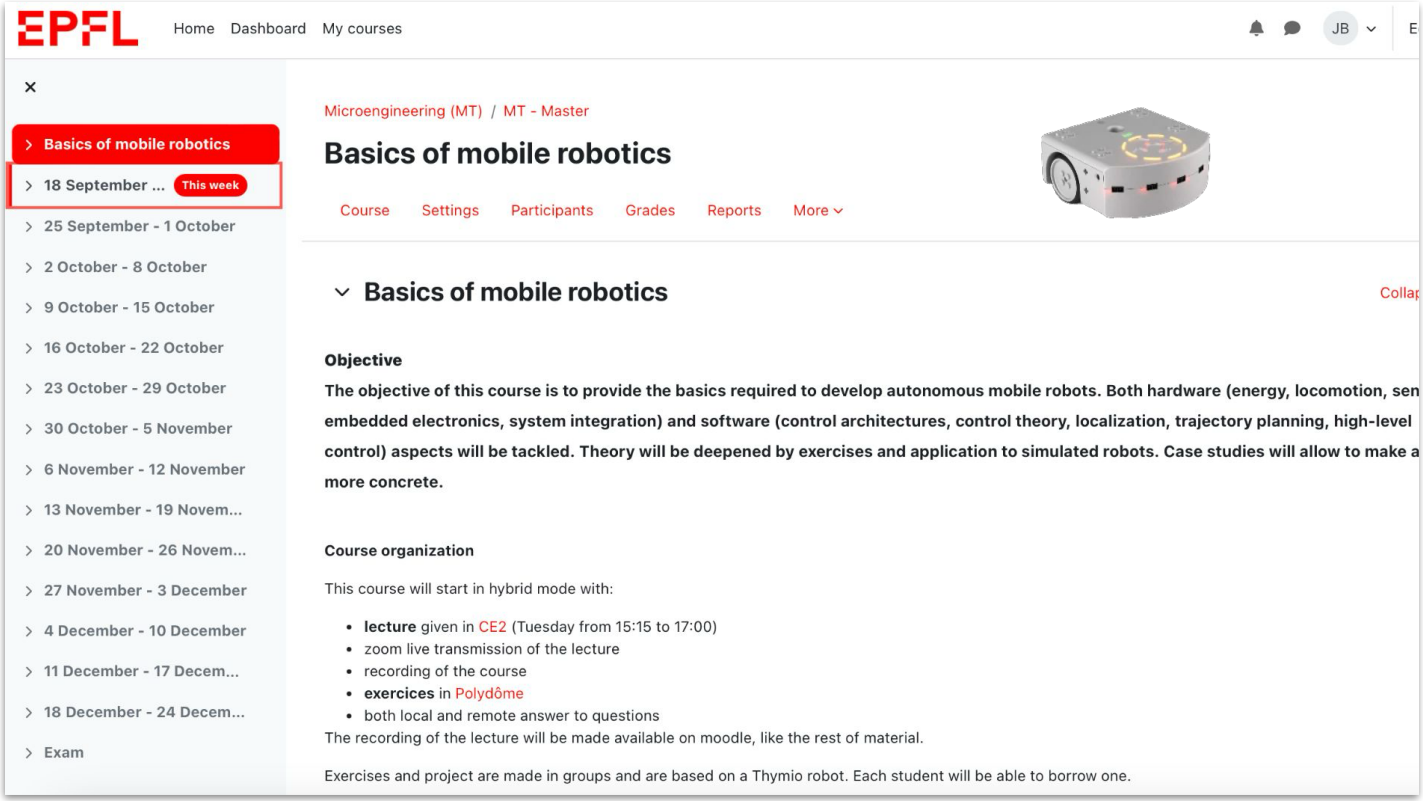
- Dedicated **TAs support** → Get help when stuck

- **Tips & Outline** → Guidance to approach each exercise
- **Quizzes + Corrections** → Practice, check, and learn





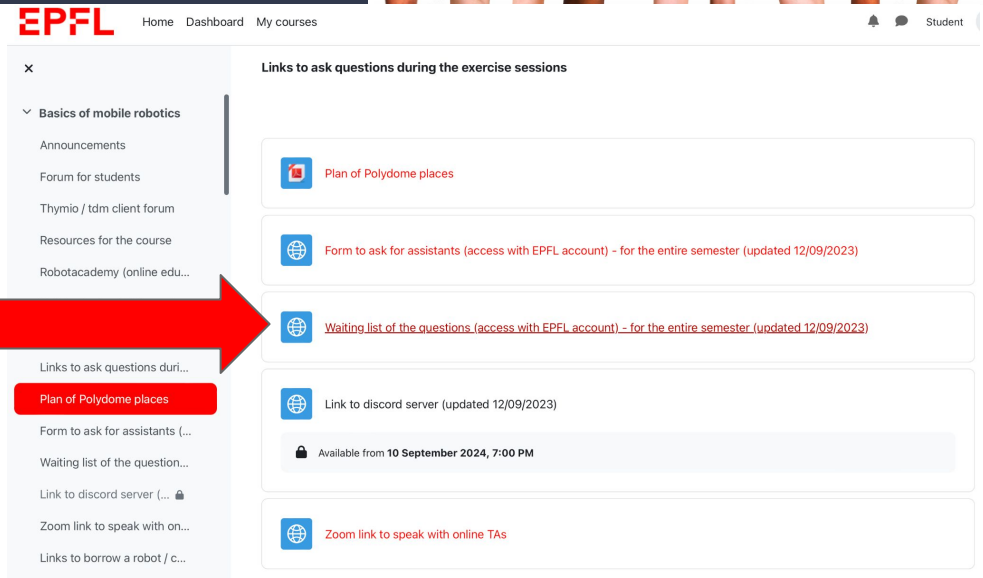
Welcome to the exercise session !



How to ask questions

During the **session exercise:**

Open shared **Google form** (on Moodle)
→ Wait an assistant



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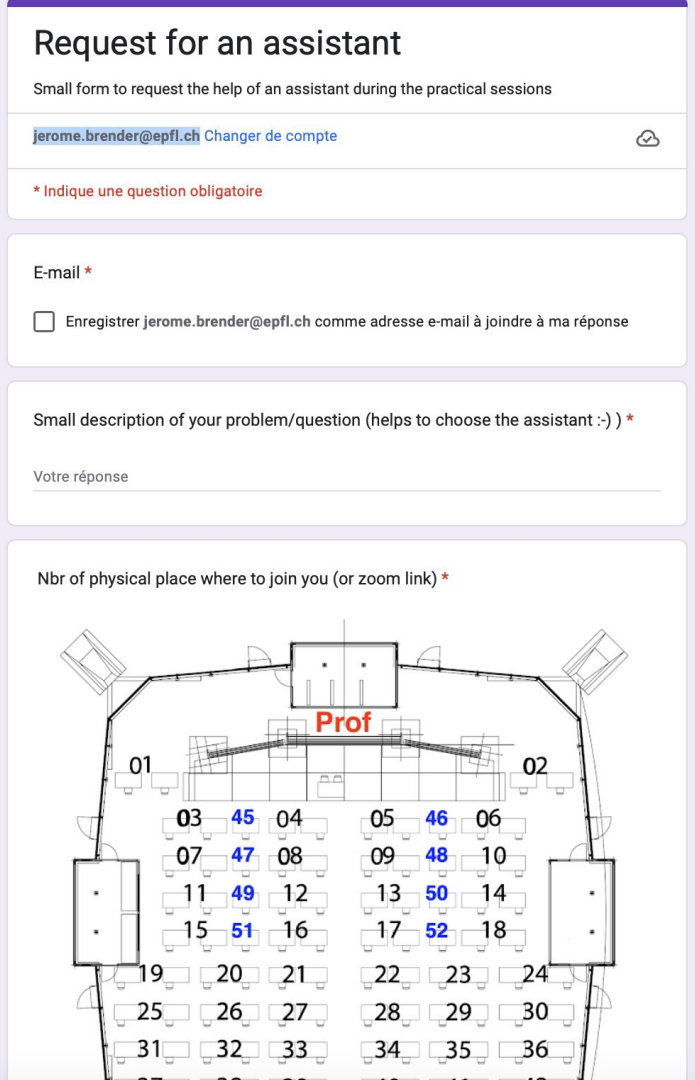


How to ask questions

During the **session exercise:**

Open shared **Google form** (on Moodle)
→ Wait an assistant

Send on **Discord** for real-time
→ Everyone can answer

Outside of the session exercise

Post on **FORUM** moodle
→ Help everyone, no stupid question go on !

Timeline for exercices

Week 1	Components of a mobile robot (**get a robot**)	**Week 7** GraphSearch For BOMR	Uncertainties (**using chatbot**)
Week 2 GraphSearch For BOMR	Vision (**using chatbot**)	**Week 8**	Uncertainties
Week 3	Vision & ANN & ML	**Week 9**	Localisation 2 + Project week 1 (+ **team building**)
Week 4	Navigation	**Week 10**	Project week 2
Week 5 GraphSearch For BOMR	Navigation (**using chatbot**)	**Week 11**	Project week 3 + group work check
Week 6	Localisation 1	**Week 12**	Project week 4 + Project presentations
Week vac	Vacation	**Week 13/14**	Project presentations + Conclusion + Dry Exam

Interactive (physically or zoom) **Be at 17:15**

AI Tutor for BOMR

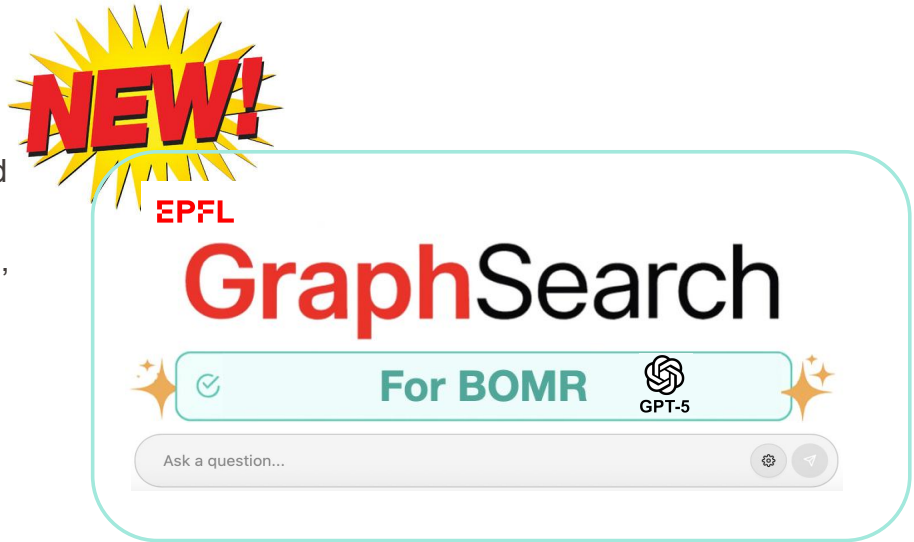
How can we design an AI tutor that actually helps you learn?

Last year:

- V1 of a chatbot but low participation

This year:

- Fully **reworked** chatbot with significantly improved performance and UI
- **Built for you (**fed with slides, exercises, solutions, datasheets, etc.)
- **Free** and powered with **GPT-5**



WE NEED YOU!

- Help us by using the **AI Tutor** in **3 exercise sessions** and participating in the user study **(short quizzes & feedback)**
- And you can make **CHF 15** if you do all **3 sessions.**

For using the AI tutor NEW!

Ready to participate?!
Let's start with this initial survey for the user study

Key word for the survey:

LLM = Large Language Model, here chatbot (ex: ChatGPT, Claude Ai, Bard…)

BOMR = Basics of Mobile Robotics (this course)

https://tinyurl.com/bomr-survey

Initial survey

📅 **Session dates for the experiment**

0) This initial survey (7 min)

1) September 16th (17h15-19h00)

2) October 7th (17h15-19h00)

3) October 28th (17h15-19h00)

💰 **15 CHF:** Each participant who participate and attend the **three** interactive sessions (with **survey**) will receive 15 CHF.

Get a robot Today (for all the semester)

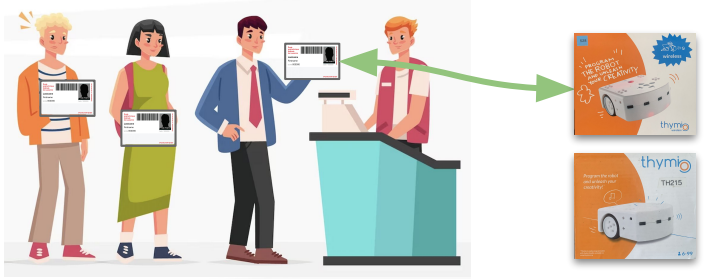
Thymio

1) Do the **queue**, and leave us your **camipro** (student card)

2) Go on **Moodle**, fill the **form** to borrow a Thymio

3) Once you have **sent the form,** come back to take back your camipro

A



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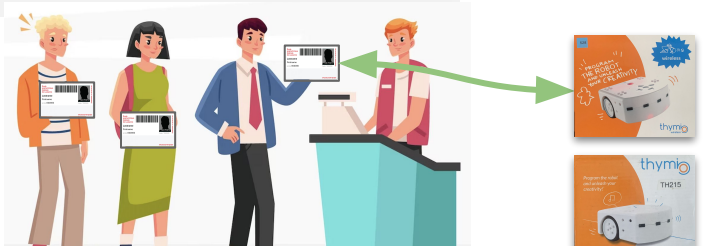
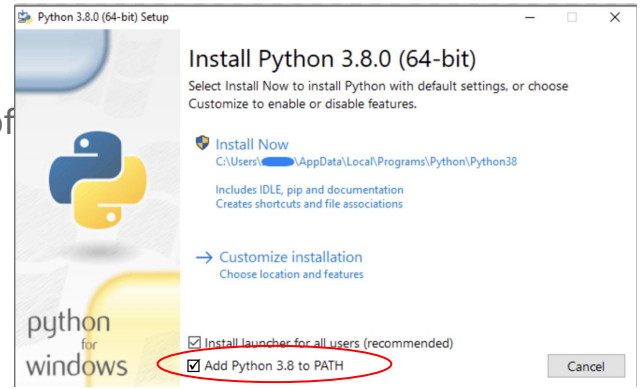


Installations

Python

If you don't have a version on python 3 installed on your computer : go to https://www.python.org/downloads/ and download the latest stable release of python 3 for your OS.



⚠️ Don't forget to tick ☑ *"Add Python 3.8 to PATH"*

Pip

If pip was not installed at the same time as python, download https://bootstrap.pypa.io/get-pip.py and run in the terminal in the folder where you have downloaded the file : **python get-pip.py**

Jupyter notebooks

Once pip has been installed, run in the terminal : **pip3 install notebook**

Opening the first notebook

Once you have installed python and Jupyter notebooks :

1. In the terminal navigate to the folder where the notebook is located using *cd*
2. Type *jupyter notebook* in the terminal
3. Double click on the file of interest in the jupyter interface to open the notebook

Alternative to the notebooks :

if you do not want to use the notebooks, you can use the PyCharm Professional IDE (license available for EPFL students) to view the notebooks although it will not always work perfectly.

Exercise session 1

All the files you will need are located on **moodle**.

1. You should have installed everything, following the message in the announcements on moodle
2. Start with the notebook **Exercises Week 1 - Locomotion, Sensors and Architectures.ipynb**
3. When you are done you are encouraged to go over the notebook **Introduction to Python and Jupyter Notebooks.ipynb**
4. When you get access to your Thymio, you should go over the notebook **Control your Thymio in Python.ipynb**

Final Remarks

1. Please do the exercise !

- The purpose of these sessions is to enhance your skills and understanding. Engage actively in the exercises !

2. Handle Robot Thymio Carefully

- These robots are sensitive and expensive equipment. Handle them with care.

3. Use Chatbots Responsibly

- If you use a chatbot, use it to LEARN, not to solve the exercise directly (we will look together soon).

4. Academic Integrity (especially for the project)

- You are in the Master's program at EPFL; we expect the highest level of integrity from you.
- Complete the work on your own or with your team.
- Cite **all your references**, libraries etc..

⚠️ **Warning**: Academic dishonesty is easily detectable and is embarrassing for both you and us !.