Institute of Automotive Technology
Faculty for Mechanical Engineering
Technical University of Munich

Artificial Intelligence in Automotive Technology

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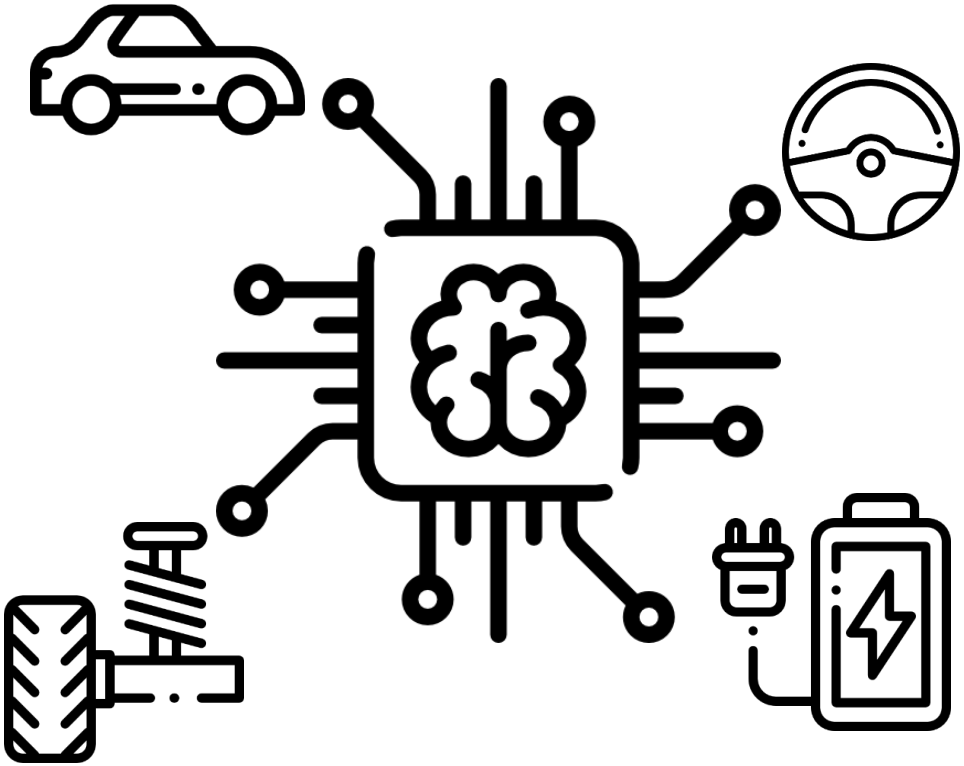


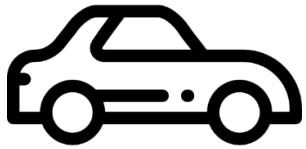
Practice Session:
Artificial Intelligence in Automotive Technology

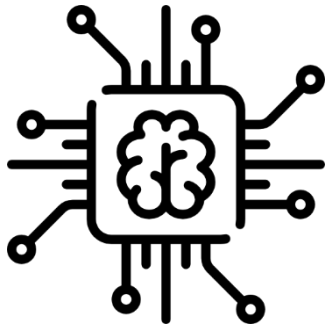
Practice Session 1: Overall Explanation
(Maximilian Geißlinger, M.Sc.)

Agenda

1. Part: Overall Introduction

2. Part: Homework





Practice session: General Information

- Dive deeper into the theoretical content we learned in the lecture
- The practice session after each lecture looks different:
  - Discussion of the homework
  - Tasks we can solve together
  - Mathematical calculations
  - Discussion and explanation of specific software
- After each practice session, we have an additional, optional **online homework every week**
- The homework will take around 30-60 minutes

Practice Session and Homework – Coding Foundations

Be aware !!!

We are doing coding tutorials and coding tests in this lecture which are based on Python3 programming.

Knowing how the Python3 syntax works is a prerequisite of this lecture.

If you do not have Python3 experience, please do this free tutorial, where you can learn the syntax:
https://www.learnpython.org/

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Practice Session 1: Overall Explanation
(Fabian Netzler)

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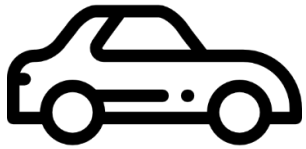
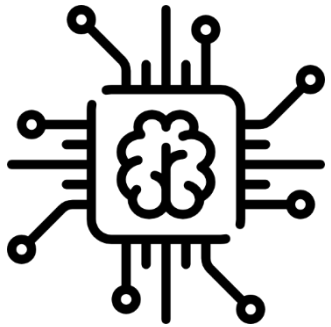
2. **Part: Homework**





Homework

- You get access to the homework via the moodle course: https://www.moodle.tum.de/course/view.php?id=82720
- The homework is only available for **one week only:**
  Start day: 18:30 – End day: 16:00
- You can start with the homework right after the lecture
- You can stop the test whenever you want a restart any time within this week
- You can change your answers any time if you have **not submitted** the test
- A grade bonus of 0.3 for the exam can be achieved by the homework
- We only consider results that are submitted – no exceptions here
- All homeworks will be uploaded as repeatable quiz at the end of the semester

Homework – Questions and Coding

- The homework consists of
  - Multiple choice questions (1 or more correct answers)
  - Picture analysis
  - Numeric calculations
  - “Coding tests”

- The coding parts are not submitted directly to moodle
- Instead jupyter notebooks are made available in the homework section
- Some questions may refer to the according notebook, where functions need to be completed and run with specific arguments, the corresponding output is then asked for in the homework quiz

Homework - Honor Code Rules

Rule 1: No current program code or solutions to individual problems should be shared with other students

Rule 2: Solutions must not be uploaded to or shared via the internet

Rule 3: All students must be able to explain the homework submitted at all times

Homework - Evaluation

- After you submitted the homework, you will receive feedback
- For each question we have **an all or nothing policy**:
  - → Each homework has a different number of points
  - → If the answer is not correct, you will get no points
  - → You have to give the right and complete answer
- After the submission you will see an evaluation of how many right answers you have given
- On average 50% correct answers → **Bonus of 0.3** on final grade
  - Average over the percentage scores from all the homework!

Example

Homework 1	Homework 2	Sum
8/10 points → 80%	6/20 points → 30%	(80% + 30%)/2 = **55%**

Homework - Evaluation