# Programmieren I (Python)

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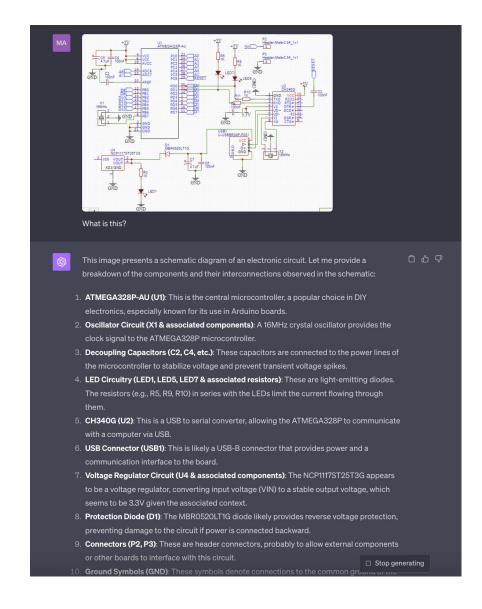
2023-10-05



### KI(?)



#### **GPT-4V**





#### The dawn of LMMs

Preliminary Explorations with GPT-4V(ision)

#### **Deutscher KI-Preis**

KI Innovationspreis 2023

#### ... and more ...

Davide Scaramuzza – X

### Organisatorisches



#### Vorlesung

Start in **KW 40** am 05.10.2023.

#### **Termine**

Do 14:30 - 16:00 **GO 18** 

Fr 08:45 - 10:15 **G0 05** 

Moodle Kursraum: https://moodle.haw-

landshut.de/course/view.php?id=10402

Kursschlüssel: k150Wi2023

Sprechstunde: Donnerstag, 9:50 - 10:20 (vorher per E-Mail

melden)

E-Mail: christian.osendorfer@haw-landshut.de



#### Praktikum

Programmieren lernt man nur durch Üben.

Praktika finden 14-tägig statt.

Start der Praktika in KW 41.

• IT@HAW, Computer setup

#### Praktikum

#### Gruppe 1/2

- Raum K0 16, Freitag, 10:30 14:20
- gerade Kalenderwochen/ungerade Kalenderwochen
- erster Praktikumstermin Gruppe 1/2: 13.10.2023

#### **Gruppe 3**

- Raum K0 16, Dienstag, 12:50 16:00, ungerade Kalenderwochen
- erster Praktikumstermin für Gruppe 3: 10.10.2023



### Noten



#### Prüfungen/Tests/Klausuren...

- Portfolioprüfung für die Vorlesung (5 ECTS)
  - Klausur: 2/3 der Note
  - Praktikum: 1/3 der Note
    - 3 angekündigte Tests je 20 Minuten während des Semesters
    - 3 Programmierprojekte während des Semesters (umfasst jeweils ca. 3 Wochen)
- Leistungsnachweis für das Praktikum (2 ECTS)
  - Bestehen der angekündigten Tests (siehe oben)



### Anwesenheitspflicht



#### Vorlesung

Keine



#### **Praktikum**

Keine, ausser an Testtagen und dem jeweiligen Abgabetag eines Projekts

### Misc



#### Werkzeuge

- Wir brauchen einen Editor, um Code einzugeben: VS Code
  - Nützlich für später: nano/vim/Emacs
- python: Siehe miniforge
- Jupyter Notebook: Interaktive Programmierung (ist auch in VS Code integriert).
- git/shell: Siehe erstes Praktikum

#### **Interessante Links**

- Programmieren I der WINF
- Real Python
- Colab
- Cocalc
- replit

- Mojo the programming language for all AI developers
- codewars
- Python Guide @ CS106a
- Python Basics
  - Tutorial beginnt etwas weiter unten



## Teach Yourself Programming in 10 Years (1)

- Get interested in programming, and do some because it is fun. Make sure that it keeps being enough fun so that you will be willing to put in your ten years/10,000 hours.
- Program. The best kind of learning is learning by doing. Talk with other programmers; read other programs. This is more important than any book or training course. Work on projects with other programmers. Be the best programmer on some projects; be the worst on some others. When you're the best, you get to test your abilities to lead a project, and to inspire others with your vision. When you're the worst, you learn what the masters do, and you learn what they don't like to do (because they make you do it for them).

# Teach Yourself Programming in 10 Years (2)

- Work on projects after other programmers. Understand a program written by someone else. See what it takes to understand and fix it when the original programmers are not around. Think about how to design your programs to make it easier for those who will maintain them after you.
  - Remember that there is a "computer" in "computer science". Know how long it takes your computer to execute an instruction, fetch a word from memory (with and without a cache miss), read consecutive words from disk, and seek to a new location on disk.