Karahan Yılmazer

30.11.1999, Istanbul/Turkey

yilmazerkarahan@gmail.com

+4917687989032

https://www.karahanyilmazer.com

https://github.com/karahanyilmazer

https://linkedin.com/in/karahan-yilmazer

EDUCATION

Technical University of Munich, *Elite Master of Science in Neuroengineering* — 10.2022 – present, Munich, Germany
- Tentative overall grade: 1.4*****
- Student representative
- Deutschlandstipendium recipient (WS 23/24)

Ludwig Maximilian University of Munich, — 10.2022 – present, Munich, Germany
Elite Master of Science in Neuro-Cognitive Psychology
- Tentative overall grade: 1.4

Technical University of Munich, *Master of Science in Electrical and Computer Engineering* — 04.2022 – present, Munich, Germany
- Tentative overall grade: 1.7

Technical University of Munich, *Bachelor of Science in Electrical and Computer Engineering* — 10.2018 – 02.2022, Munich, Germany
- Thesis topic: **Eye Blink Detection and Motor Imagery Using A Wireless EEG: An Investigation**, Grade: 1.3
- Overall grade: 2.2

BCI & Neurotechnology Spring School, *g.tec medical engineering GmbH* — 04.2021, Remote
- Attended lectures about various topics from **brain research**
- Attended the **BR41N.IO Hackathon**
  - Developed a multiplayer video game using **motor imagery-based EEG-BCI**
  - Rewarded with **3rd place for programming projects**

Norwegian University of Science and Technology, *Exchange Semester* — 08.2020 – 12.2020, Remote
- **Introduction to Neuroscience**, Grade: A
  - Presentation topic: **Emergent Properties of Neuronal Networks**

German High School of Istanbul, *Abitur* — 02.2013 – 05.2018, Istanbul, Turkey
- Abitur grade: 1.4
- Abitur subjects: Mathematics, Biology, German, English

***** *In the German grading system, grades range from 1.0 (very good) to 5.0 (fail).*

PROFESSIONAL EXPERIENCE

UX Designer, *Q4U* — 12.2023 – present, Remote
- Creating client-focused **website designs** for optimal user experiences

Teaching Assistant, *Technical University of Munich* — 04.2021 – present, Munich, Germany
- Python Workshop (WS 20/21 - WS 23/24)
- Neuroprosthetics (WS 22/23 - WS 23/24)
- Biosignal Processing and Modeling (SS 23)
- Human-Centered Neuroengineering: Cybathlon (SS 22)
- Signal Processing: Dynamic System Modeling (SS 22)
- Machine Intelligence and Society (in Python) (SS 22)
- Physics for Electrical Engineers (SS 21)
- C++ workshop (WS 20/21)

Research Assistant, *Institute for Cognitive Systems, Technical University of Munich* — 10.2021 – 06.2023, Munich, Germany
- **Primary contact for EEG systems**, oversaw and maintained the devices
- Designed and tested **home appliance systems for a spinal cord injury patient**
- Conducted **motor imagery recordings and analysis** using EEG
- Implemented **online eye blink detection** and **external device control** using EEG

INTERNSHIPS

Prof. Surjo R. Soekadar, *Clinical Neurotechnology Lab, Charité* — 08.2023 – present, Berlin, Germany
- Classification of rock-paper-scissors gestures recorded using **optically pumped magnetometers (OPM)**
- Review of brain-computer interfaces for neurorehabilitation of stroke patients

Prof. Simon Jacob & Prof. Moritz Grosse-Wentrup, *Translational NeuroTechnology Laboratory, Technical University of Munich & Research Group Neuroinformatics, University of Vienna* — 03.2022 – 04.2022, Munich, Germany
- Set up the hard- and software for the **Brain-AI-Interfaces project** involving an **aphasia patient** that will be implanted with a **microelectrode array**
- Worked on an **automatic spike sorting** pipeline

Prof. Gordon Cheng & Nicolas Berberich, — 05.2021 – 07.2021, Munich, Germany
Institute for Cognitive Systems, Technical University of Munich
- Developed a systematic way to **assess the signal quality of EEG** recordings
- Made **rest state and mental load recordings** with different EEG systems

Prof. Ata Akın, *Acıbadem University* — 10.2020, Istanbul, Turkey
- Researched **fundamental topics in brain research**
- Statistical analysis of **Stroop test** results

Prof. Moritz Grosse-Wentrup, *Research Group Neuroinformatics, University of Vienna* — 10.2019, Vienna, Austria
- Set up **research-grade wet EEG systems**

PUBLICATIONS

Grip Force Dynamics during Exoskeleton-Assisted and Virtual Grasping, *ICORR* — 09.2023
https://doi.org/10.1109/ICORR58425.2023.10304698

Investigating the relationship between cue immersion and the strength of motor imagery during hand and wrist movements, *IEEE/EMBS* — 04.2023
https://doi.org/10.1109/NER52421.2023.10123823

LANGUAGES

Turkish
Native

English
C1, TOEFL iBT Score: 113

German
C1, German Abitur

Norwegian
A2, TUM Language Course

SKILLS

Programming Languages
- *Python*
- *MATLAB*
- *C++*
- *C*

Software
- *Machine Learning*
- *Data Analysis*
- *3D Modeling (Blender & Fusion 360)*
- *GUI Development (Qt Creator)*

EEG
- *Setting up and recording*
- *Setting up computer-driven experiments*
- *Data analysis (MNE & EEGLAB)*

Microcontrollers
- *ESP32*
- *Raspberry Pi*
- *Arduino*

INTERESTS

TEDxTUM Curation Team Member | **President of the International Committee of Olydorf**

Head of "Science Orientation Week" Team | **Head graphic and logo designer in school magazine "Çizgi"**

Electric Guitar *(London College of Music Examinations Grade 4)* | **SSI Open Water Diver** | **Advanced Skier**

Aikido *(Brown belt, Yeşilyurt Sports Club)* | **Brazilian Jiu-Jitsu** *(White belt with two stripes, Pound for Pound Munich)*