

MEHMET YİĞİT AVCI

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EDUCATION

TECHNICAL UNIVERSITY OF MUNICH

Oct. 2022 – Jul. 2024

Master of Science

Biomedical Computing / Faculty of Informatics

BOGAZICI UNIVERSITY

Sep. 2017 – Jun. 2022

Bachelor of Applied Science and Engineering

Electrical and Electronics Engineering

RESEARCH & TEACHING EXPERIENCE

TUM COMPAI Lab, Supervisor: Prof. Julia Schnabel

Mar. 2023 - Present

Research Intern

- Working on unsupervised representation learning for detection and localization for Alzheimer's Disease

Bogazici University EE 304, Supervisor: Prof. Alpay Özcan

Mar. 2022 - Jun. 2022

Undergraduate Teaching Assistant

VAVlab, Supervisor: Prof. Burak Acar

Sep. 2021 - Jun. 2022

Senior Year Project

- Worked on a novel method for deep non-negative matrix factorization of face images for recognition and brain connectomes for classification of Alzheimer's Disease according to severity

Harvard-MIT Health Sciences & Technology

MGH Martinos Center for Biomedical Imaging

Supervisor: Dr. Qiuyan Tian, Prof. Berkin Bilgic

Apr. 2021 - Present

Research Assistant

- Worked on a novel dropout + averaging strategy that allows for quantifying uncertainty and training networks with very limited amounts of data for quantitative imaging

- Working on GAN methods for diffusion MRI data analysis with synthesized anatomical images

PUBLICATIONS

Christiane Posselt, **Mehmet Yigit Avcı**, Mehmet Yigitsoy, Patrick Schünke, Christoph Kolbitsch, Tobias Schäffter, Stefanie Remmele, "Simulation of acquisition shifts in T2w FLAIR MR images to stress test AI segmentation networks", (preprint) **SPIE Journal of Medical Imaging**, 2023

Christiane Posselt, **Mehmet Yigit Avcı**, Mehmet Yigitsoy, Patrick Schünke, Christoph Kolbitsch, Tobias Schäffter, Stefanie Remmele, "NeuroTEST - How do image acquisition shifts affect SOTA MS lesion segmentation models?", **MedizinTechnik Postersymposium 2023** (Poster)

-Aja-Fernandez, ... **Avcı, Mehmet Yigit**, ..., Pieciak, Tomasz, "Validation of Deep Learning Techniques for Quality Augmentation in Diffusion MRI for Clinical Studies", **NeuroImage: Clinical**, 2023

-**Mehmet Yigit Avcı**, Ziyu Li, Qiuyun Fan, Susie Huang, Berkin Bilgic, Qiuyan Tian, "Quantifying the uncertainty of neural networks using Monte Carlo dropout for deep learning based quantitative MRI", **ISMRM 2022** (oral Power Pitch presentation)

RELEVANT SKILLS

Languages: Python, C/C++, MATLAB, SQL

Libraries: NumPy/SciPy, Pytorch, Tensorflow, MONAI, OpenCV, ROS

Other : Linux OS, Docker, Kubernetes, LaTeX, PowerBI

WORK EXPERIENCE

deepc

Sep. 2022 - Present

Machine Learning R&D Intern

- Working on body part classification problems for different imaging modalities
- Working on MS Lesion segmentation with SoA models
- Helping the team dockerizing and running the models in cloud with Kubernetes structure

ASELSAN

Aug. 2021 - Sep. 2021

Computer Vision R&D Intern

- Worked on project regarding object detection and tracking with drone
- Mainly focused on object detection and deep learning algorithms using OpenCV and PyTorch
- Used TensorRT on Jetson Xavier NX for high-performance runtime and ROS for communication with drone

Borusan EnBW Energy

Jan. 2021 - July 2021

Data Analysis and Algorithm Intern

- Helped team about wind-hydro power data storage and interpretation using Python/NumPy and SQL
- Helped team about automatization of performance reports using PowerBI

Turkcell

June 2020 - Dec. 2020

Data Network Intern

- Helped team regarding switch and router configurations, IP address operations with Python scripts
- Awarded second place in project competition between interns with project titled 'Predictive Maintenance for Turkcell'

HONORS AND ACHIEVEMENTS

- [Ranked 4th in QUAD \(MICCAI\)'22 challenge](#)
- ISMRM Annual Conference Trainee Stipend (2022)
- High honors graduate of Bogazici
- Ranked 117th among 1.6 million candidates in the Nationwide University Entrance Exam (YGS)
- Ranked 3th among 0.2 million candidates in the national postgraduate education entrance exam (Turkish GRE)

EXTRACURRICULAR

CMAS 2-STAR SCUBA DIVER

- Passed required theoretical and practical courses, currently holding CMAS 2 Star Diver License
- Actively participated in Bogazici University Sub-Aquatic Sports (BUSAS) and organized diving trips

ZEYBEK DANCER (Turkish Folk Dance)

- Awarded second place with Bogazici Zeybek Team on Intercollegiate Folk Dance Competition (2018)

MEMBER OF BUIK

- Organized several conferences regarding finance and economics with Bogazici University Management Club (BUIK)