GURAY OZGUR

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ABOUT ME

Data scientist with a **results-driven** mindset, specializing in **Machine Learning Operations (MLOps)**. Enthusiastic about translating technical skills into **real-world impact** through innovative problem-solving. Eager to learn and contribute **collaboratively**, committed to making a **meaningful difference** with **ML-powered products**.

EDUCATION

Machine Learning, MSc — Sep 2021 - Nov 2023
University of Tübingen — *Tübingen, DE*
GPA: 1.91/1.00

Electrical and Electronics Engineering, BSc — Sep 2015 - Jul 2021
Middle East Technical University (ODTÜ) — *Ankara, TR*
CGPA: 3.43/4.00 (German Grade: 1.85) | ABET-accredited

Mathematics, BSc — Sep 2016 - Jul 2021
Middle East Technical University (ODTÜ) — *Ankara, TR*
CGPA: 3.53/4.00 (German Grade: 1.71)

Electrical Engineering, BSc — Aug 2018 - Jan 2019
Korea Advanced Institute of Science and Technology (KAIST) — *Daejeon, KR*
Exchange Semester

EMPLOYMENT

Master's Thesis — Apr 2023 – Oct 2023
Siemens AG — *Erlangen, DE*

Neural Architecture Search for Semi-Supervised Anomaly Detection on a Microcontroller. Developed a Hardware-Aware Neural Architecture Search (HW-NAS) pipeline for MCU anomaly detection. Achieved a flexible, memory-efficient pipeline using weight-sharing, model-based predictors, deployed to STM32L4+. Explored and optimized real-time accuracy-latency trade-offs.

Working Student — Jun 2022 – Mar 2023
Neura Robotics GmbH — *Metzingen, DE*

Designed and developed electronics projects, collaborated with cross-functional teams to create cutting-edge robot arms. (MAiRA, MiPA)

Machine Learning Intern — Feb 2021 - Apr 2021
Kuartis Technology and Consulting — *Ankara, TR*

Contributed to developing algorithms for gas pipeline security by optimizing acoustic anomaly detection. Used generative models (VAEs, GANs), performed EDA with t-SNE, and HDBSCAN clustering. Extracted features (mel-scaled spectrograms, MFCCs) for effective data preprocessing.

Embedded Systems Intern — Jun 2018 – Aug 2018
Darkblue Telecommunication Systems — *Ankara, TR*

Gained hands-on experience in embedded systems and firmware development for telecommunication applications.

SKILLS

Data Management SQL, Pandas

Visualization and Image Processing Matplotlib, Seaborn, OpenCV

Development Tools Git, Continuous Integration/Continuous Deployment (CI/CD), C/C++, MATLAB, NumPy, Python, PyTorch, scikit-learn, Jupyter Notebooks, SciPy, VS Code, TensorFlow

Model Management and Tracking MLflow, Weights & Biases

Infrastructure and Deployment GPU Training, ONNX, Cloud Platforms (AWS, Google Cloud Platform, Microsoft Azure), Containerization (Docker, Kubernetes)

Soft Skills Communication, Teamwork, Problem Solving, Self-management

Natural Languages: English (C2), German (A2-B1), Turkish (Native)

DEMO PROJECTS

Hodgkin Huxley Model in MATLAB (Mathematical Modelling) Implemented a software code to model the excitable membrane of an axon using the Hudgkin-Huxley (H&H) network model based on the rate constants for ionic channel conductivities determined by H&H. See the project on GitHub: GitHub

A Literature Review on Voltage References (Documentation) Conducted a comprehensive comparison of 30 state-of-the-art Voltage Reference Circuits published in the last 10 years (2010-2020). See the project on GitHub: GitHub

Capstone Project (Teamwork and Leadership) Led a team of 5 students in an engineering design project spanning two semesters. Designed and implemented a product to address a specific problem under the guidance of Assoc. Prof. Fatih Kamışlı. The project report includes our top-down design process, performance test analyses, and visuals of the final product. Repository also includes scripts for training a model and running it on a Raspberry Pi and Arduino. See the project on GitHub: GitHub