

Baki Kocabasa, M. Sc.



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📍 Braunschweig/ Germany

SKILLS

Python — Expert, **Matlab/ Simulink** — Expert, **AWS Cloud** — Expert, **DevOps and CI/CD** — Expert, **Tableau** — Proficient, **SQL** — Proficient, **Scrum** — Proficient, **Java** — Proficient

LANGUAGES

German — Full Working Proficiency
English — Full Working Proficiency
Turkish — Native

ADDITIONAL EXPERIENCE

Electric Powertrain Scrutineer and Engineering Design Event Judge
Formula Student Czech
08/2024 – 08/2024 | Most, Czech Republic

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Erasmus+ Exchange Student
University of Kassel
10/2018 – 10/2019 | Kassel, Germany

Extra role: Hercules Racing Team/ Electrical Powertrain/ HV Battery Production

Lifeguard
Work & Travel
06/2018 – 09/2018 | Maryland, USA

INTERESTS

Real Time Object Detection Algorithms
Powertrain and Battery Systems
Process Optimization
Time Series Analysis
Data Driven Modelling

EXPERIENCE

Volkswagen AG - Powertrain Development Department
Master Thesis & Internship
10/2023 – 10/2024 | Wolfsburg, Germany

- Deployed machine learning models with CI/CD pipelines on AWS Cloud for scalable, production-ready applications
- Developed automated maneuver detection algorithms to enhance maneuver based metrics to be investigated
- Applied unsupervised learning techniques for driving style clustering and high-dimensional data insights
- Conducted fleet analysis with interactive visualizations to identify trends and support simulation inputs
- Extracted driving behavior metrics from time-series data to optimize powertrain development parameters
- Designed ETL pipelines for high-volume data integration using modern frameworks for efficiency
- Implemented feature engineering to preprocess large datasets and improve model performance

Micronova AG- Artificial Intelligence Team
Working Student
10/2021 – 10/2023 | Wolfsburg, Germany

- Supervised machine learning model validation, reporting and evaluation
- Data analysis and visualization
- HiL system implementation and reporting
- Implementing hyperparameter optimization techniques

Elenia - Institute of Energy Systems
Research Assistance
03/2022 – 03/2023 | Braunschweig, Germany

- Time series data analysis with MATLAB
- Investigating battery diffusion rates
- Interpretation of experimental design and data
- Acknowledged various battery measurements

Daimler Trucks AG- Quality Assurance Department
Internship
07/2021 – 10/2021 | Kassel, Germany

- Ensured quality standards through various inspections and tests on axles in production

Sisecam Chemicals- Electrical Maintenance Chieftaincy
Internship
06/2020 – 09/2020 | Mersin, Türkiye

- Development of PLC based circuits and investigation of power generation systems

EDUCATION

Technische Universität Braunschweig
Master of Science- Computational Science in Engineering
10/2021 – 10/2024 | Braunschweig, Germany

- Student research thesis: SOH and SOC estimation of Li-ion batteries by using machine learning methods
- Master thesis: Machine learning based driving style identification for automated test cycle generation
- Extra role: Student representative for 2 Years
- Founder of CSE student commission

Yildiz Technical University
Bachelor of Science- Electrical Engineering
09/2015 – 02/2021 | Istanbul, Türkiye

- Thesis: Solar energy assisted and genetic algorithm based energy management system for electric vehicles
- Extra role: YTU Racing Team/ Electrical Powertrain/ HV Battery Designer