Muhammet Ozdemir

AI Engineer & Researcher
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Summary

Available for full-time roles; lead developer on TUBITAK and TUSEB-funded AI and computer-vision research projects; developer of novel scientific methods in AutoML and AI contributing to the literature

Education

Erciyes University Kayseri, Turkiye
B.S. in Computer Engineering *Sept. 2021 – June 2026*

Experience

Erciyes University Artificial Intelligence and Big Data Application and Research Center Remote
AI Researcher (Full-time) *Oct. 2024 – Present*

- With the support of the Computer Engineering Department and the Research Center, I conduct AutoML and AI optimization research, publish in SCI/E-indexed venues, and work as a freelance researcher.

Erciyes University Kayseri, Turkiye
AI Intern *Sept. 2024 – Jan. 2025*

- Built and deployed a real-time, multi-camera CNN for campus access control, people counting, and ID verification end-to-end from design to production

Projects

Development of AutoML Systems with Optimisation Algorithms March 2024 – Present

- Developed optimisation-driven AutoML methods that automate preprocessing, NAS, activation and loss design, weight initialisation, and hyperparameter optimisation, contributing to SCI/E-indexed research outputs

Hybrid Mammography Analysis: Early Breast-Cancer Detection with Hybrid CNN Architectures 2024

- Built hybrid CNN on 4,000+ mammograms for lesion detection; achieved >90% BI-RADS accuracy and became a national finalist presenting in Antalya (TUSEB & Ministry of Health funded)

ML-Based Customer Matching and Product Recommendation System 2023

- Built hybrid ML engine combining clustering and user/item-based collaborative filtering; achieved >90% match accuracy and integrated into POS/mobile apps (Tubitak funded)

Technical Skills

Domains: AI Research, AI Optimisation, AutoML, Computer Vision, Machine Learning, Deep Learning
Applied Areas: Image Processing, Data Analysis, MLOps
Tools: Python, PyTorch, SQL, Pandas, NumPy, Scikit-learn, OpenCV, Matplotlib, CUDA, Git

Publications

Automatic Design of Deep Neural Network Activation Functions Using Genetic Programming (Gazi University Journal of Engineering and Architecture - SCI/E)

Analysis of Evolutionary and Genetic Programming Mutation Operators for Automated Activation Function Design in Deep Neural Networks (International Journal of Machine Learning and Cybernetics - SCI/E)

Certifications

St Giles International United Kingdom
English Language B1+ – B2 *Sept. 2025*

Organizations

ERU AI Club Turkiye
Founder, Club President, AI Project Team Leader *March 2024 – Present*

- Led 20 CS students on 8 TUBITAK-funded AI projects and a TUSEB-backed health-AI initiative (national finalist), served as team lead and coordinator, and co-authored resulting publications