Okan Olgun

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Summary

Applied AI Engineer with hands-on experience in 3D computer vision, NLP, and end-to-end machine learning systems. Specialized in 3D segmentation and advanced computer vision architectures, including defense-sector and medical imaging use cases. Proven track record in building production-ready ML pipelines, from data preparation to model development, validation, and deployment. Experience in bridging academic research with real-world production constraints and leading small research teams. Actively interested in applied AI systems with measurable real-world impact.

Core Skills

Artificial Intelligence & Machine Learning
Deep Learning, Machine Learning, End-to-End ML Systems, Model Development & Evaluation

Computer Vision & Medical Imaging
2D/3D Computer Vision, 3D Segmentation, Medical Imaging (MRI, DICOM), Object Detection

Systems & Deployment
Embedded AI Systems, Microservices Architectures, GPU Acceleration, Low-Latency Inference, Model Optimization (FP16 / INT8)

Programming & Frameworks
Python, C++ (C++14/17), SQL, PyTorch, MONAI, OpenCV, CUDA, TensorRT, scikit-learn

Data, Backend & Research
Data Engineering & Analytics, Database Systems, Applied Research, Statistical Analysis, Technical Leadership

Experience

AI Engineer — IsıTech **Ankara, Turkey**

Mar 2025 – Present

- Reduced manual 3D medical image segmentation time from **3–4 hours to 1–2 minutes** by designing and training end-to-end 3D segmentation models for clinical workflows.
- Built and developed a **fully domestic 3D segmentation system**, achieving **Dice scores of up to 0.77 (tumor) and 0.70 (vascular structures)** on a limited real-world data set (˜70 patients).
- Designed task-specific **3D deep learning architectures** optimized for real-world MRI variability under strict clinical accuracy constraints.
- Developed an end-to-end AI pipeline that covers data standardization, preprocessing, training, validation, deployment, and reporting.

- Architected and deployed AI services using a **microservices-based approach** on cloud infrastructure.
- Took on major responsibilities in **TUBITAK-funded R&D projects**, contributing to system design, execution, statistical analysis, visualization, and academic manuscript preparation.

Data Scientist — Mono Payments (Remote) **London, UK**

Jun 2024 – Dec 2024

- Led end-to-end data, ML, and database responsibilities of the *Unipubs* platform.
- Extracted and cleaned heterogeneous data sources, including user logs, transaction data, and visual product data.
- ML models built to analyze customer behavior, spending patterns, and temporal purchase trends.
- Delivered data-driven recommendations influencing advertisement timing, product highlighting, and discount strategies.
- Contributed to measurable improvements in clicks, session duration, basket visits, and sales.

Data Analyst Intern — TAM Finans Faktoring **Istanbul, Turkey**

Summer 2023

- Analyzed real-time data streams from **40 branches**.
- Evaluated the impact of interest rates, maturity periods, and campaign strategies on sales.

Selected Projects

High-Performance Aerial Threat Detection & Telemetry Analysis System

- Designed a **real-time aerial threat detection and telemetry analysis system** for UAV/SUAV use cases, optimized for embedded defense environments with strict latency and memory constraints.
- Built a **custom binary telemetry decoder and in-house linear algebra engine** to enable accurate 3D motion modeling and sensor data interpretation.
- Implemented a **high-performance C++ computer vision pipeline** with object detection and Kalman filter–based tracking for stable real-time target tracking.
- Deployed and optimized **YOLO-based models using TensorRT and CUDA**, achieving **3–4× inference speedup** and targeting **sub-millisecond latency** via FP16/INT8 quantization and GPU-accelerated preprocessing.

PERSANAVI — Personalized Surgical Anatomy Viewer (TUBITAK Project)

- Developed 3D deep learning models for personalized surgical anatomy visualization.
- Reduced manual segmentation time from **3–4 hours to ˜2 minutes** using automated 3D AI-based segmentation.
- Achieved **Dice scores up to 0.77 (tumor) and 0.70 (vascular structures) on a limited real-world data set (˜70 patients)**.
- Implemented a novel MRI-sequence–based tumor and vascular structure segmentation approach not yet published in existing literature.

ShadowEye — AI-Driven Cybersecurity Platform

- Built an AI-powered platform for detecting leaked data from dark web sources.
- Created custom datasets via scraping and manual labeling.
- Trained **360 ML models**, achieving **86% accuracy** and **92.7% ROC-AUC**.
- Enabled near real-time breach detection (˜5 minutes).

Data-Driven Energy — Resilient & Sustainable Power Systems

- Contributed to a research project on the **commercialization of digital technologies in energy systems** under the supervision of Dr. Sinan Küfeoğlu (UK Government).
- Conducted in-depth **quantitative and qualitative analyses**, market scanning, and data-driven evaluations to support strategic decision-making.
- Led and coordinated a **10 person research team**, ensuring task planning, execution, and timely delivery of analytical outputs.

Education

TED University, Ankara, Turkey
B.S.E. in Computer Engineering (English)
Minor: Applied Data Analytics

Ankara Atatürk High School, Ankara, Turkey
One-year intensive **English and German preparatory program**

Additional Experience

Semiprofessional Handball

- Competed at city and regional levels with high school and university teams. Achieved **2nd place** in the 2022 International Alanya Beach Handball Tournament.

Social Responsibility & Community Engagement

- Participated in the *"Can You Spare Me 2 Hours?"* project, working directly with children with autism. Developed empathy, patience, and strong communication skills through hands-on engagement.