



Ahmet Ruçhan AVCI

Artificial Intelligence Engineer

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PROFILE

- Research-driven and solution-oriented **AI/ML Engineer** with a strong sense of ownership and a calm, professional communication style. I turn complex, ambiguous problems into practical outcomes through structured thinking, experimentation, and continuous improvement.

EDUCATION

Beykent University, Faculty of Engineering Computer Engineering 11/2020 – 06/2024 | İstanbul, Türkiye
Cumulative GPA: 3.64 / 4.0

- Graduated at the pinnacle of class achievement within a competitive computer engineering curriculum, recognized with **valedictorian honors** while maintaining an average GPA above 3.64 across all semesters.

Adile Mermerci High School, Mathematics Science 10/2015 – 07/2019 | İstanbul, Türkiye

PROFESSIONAL EXPERIENCE

Hisar Hospital Intercontinental | Full-Time, 07/2025 – Present
Jr. Artificial Intelligence Engineer Üsküdar, İstanbul, Turkey

- Owned the design and delivery of production AI features across **ML/DL/NLP + GenAI/LLM**, from prototyping and evaluation to API release and enterprise integration.
- Shipped Python services with FastAPI exposing clinical automation capabilities; delivered an OCR pipeline processing ≥300 documents/day and a Speech-to-Text workflow used by ≥5 doctors/day (≥3 minutes each), integrated into ERP/HBYS operational flows.
- Designed and implemented an end-to-end **RAG** system (ingestion → chunking → embeddings → retrieval → grounded generation) using **LangChain/LangGraph**, **Vector DB**, and **LLM APIs** over a curated knowledge base of **150 documents**.
- Implemented evaluation-minded iteration for retrieval quality via manual spot-checks, error analysis, and prompt/retrieval tuning (e.g., chunking strategy, top-k retrieval), improving grounding and reducing hallucinations in production responses.
- Owned backend data and performance components: implemented persistence and query patterns using **PostgreSQL / Microsoft SQL Server / MongoDB**, and added **Redis caching** for low-latency access.
- Implemented containerized deployment and release workflow: packaged services with **Docker**, deployed on **Kubernetes**, and managed CI/CD + lifecycle with **GitLab**, enabling repeatable releases and stable production operation.
- Enabled flexible LLM serving paths based on constraints (cloud APIs vs. local inference), working with vLLM, llama.cpp, and MLX where applicable to balance performance, cost, and compliance.
- Focused on reliable production operations (monitoring, debugging, incident handling) and **MLOps-ready** patterns (versioning, reproducibility), ensuring AI features remain maintainable as usage scales.

TÜBİTAK BİLGEM, Intern Machine Learning Engineer 06/2023 – 09/2023 | Gebze, Kocaeli, Turkey

- Worked as a **Machine Learning Engineer** at **B3LAB (Cloud Computing & Big Data Research Laboratory)**, owning end-to-end workflows from data preparation and feature engineering to model training, evaluation, and iterative improvement for production-oriented ML use cases.
- Contributed to the **EU-funded STORAIGE** initiative by designing and optimizing **ML/DL models** to strengthen automation and decision-support, following a rigorous experimentation loop (baseline → improvement → evaluation).
- Built repeatable data pipelines and transformed **10,000+ raw datasets** into clean, structured, model-ready assets; performed EDA and visualization to guide feature selection, model choice, and hypothesis-driven improvements.
- Developed and tuned real-time anomaly detection solutions using both supervised and unsupervised approaches; applied cross-validation, hyperparameter tuning, and error analysis to improve generalization.
- Delivered measurable results: achieved a **15% reduction** in error rates and a **25% increase** in operational efficiency through improved detection accuracy and faster actionable signaling in real-time workflows.
- Documented experiments and results clearly, enabling reproducibility and smooth handoff across **research/engineering** stakeholders.

PROJECTS

- Ablacı** *Co-Founder & CTO* 12/2025 – Present
- It is a comprehensive platform vision that brings together multi-layered domains such as hand–face analysis, dream interpretation, numerology, and character insights to deliver a personalized, **AI-powered “self-discovery”** experience.
 - Ablacı combines **multimodal vision** to extract signals from hand/face photos with **knowledge-grounded generation (RAG)** that retrieves curated rules and verified sources (e.g., dream interpretation, numerology, ebced). It delivers a personalized, multi-step conversational experience with a consistent analyst persona, produces structured reports with quality checks, and follows a **privacy-first** design approach.

- TEKNOFEST and European Rover Challenge,** 09/2024
Autonomous Ground Rover
- Led the development of AI, ML algorithms, and computer vision systems for an autonomous ground rover competing in the **European Rover Challenge (ERC)** and **TEKNOFEST**. Utilized ROS and Jetson Orin Nano to enhance navigation, object detection, and decision-making, achieving 1,000+ successful detections in evaluations.

- DetectHub,** *Computer Vision Project* 04/2024
- Founded **DetectHub**, a collaborative platform for 500+ researchers and developers in computer vision and AI, enabling the creation of 200+ models and 300+ datasets, improving object detection accuracy by 15% and accelerating project timelines.

SKILLS

Python • C (Programming Language) • LangChain / LangGraph • LLM Inference (Serving) • Keras • Scikit-Learn • PyTorch • TensorFlow • Machine Learning • Deep Learning • OpenCV • YOLO • Computer Vision • Retrieval-Augmented Generation (RAG) • Supervised Fine-Tuning (SFT) • Generative AI (GenAI) • MongoDB • PostgreSQL • Redis • Linux • FastAPI • Docker • Kubernetes • Git • GitLab CI/CD • Spec-Driven Development (OpenSpec)

LANGUAGES

Turkish: *Native* • **English:** *Fluent*

INTERESTS

Aikido: (Shodan: Officially Licensed Black Belt) • **Science** • **Space and Technology** • **Book and Authorship** • **Art and Design**