



# 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

<b>Beykent University, Faculty of Engineering Computer Engineering</b> Cumulative GPA: 3.64 / 4.0	11/2020 – 06/2024   İstanbul, Türkiye
• Graduated at the pinnacle of class achievement within a competitive computer engineering curriculum, recognized with <b>valedictorian honors</b> while maintaining an average GPA above 3.64 across all semesters.	

<b>Adile Mermerci High School, Mathematics Science</b>	10/2015 – 07/2019   İstanbul, Türkiye
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### PROFESSIONAL EXPERIENCE

<b>Hisar Hospital Intercontinental   Full-Time, Jr. Artificial Intelligence Engineer</b>	07/2025 – Present Üsküdar, İstanbul, Turkey
• Owned the design and delivery of production AI features across <b>ML/DL/NLP + GenAI/LLM</b> , 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 <b>RAG</b> system (ingestion → chunking → embeddings → retrieval → grounded generation) using <b>LangChain/LangGraph</b> , <b>Vector DB</b> , and <b>LLM APIs</b> over a curated knowledge base of <b>150 documents</b> . • 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 <b>PostgreSQL / Microsoft SQL Server / MongoDB</b> , and added <b>Redis caching</b> for low-latency access. • Implemented containerized deployment and release workflow: packaged services with <b>Docker</b> , deployed on <b>Kubernetes</b> , and managed CI/CD + lifecycle with <b>GitLab</b> , 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 <b>MLOps-ready</b> patterns (versioning, reproducibility), ensuring AI features remain maintainable as usage scales.	

<b>TÜBİTAK BİLGE M</b> , Intern Machine Learning Engineer	06/2023 – 09/2023   Gebze, Kocaeli, Turkey
• Worked as a <b>Machine Learning Engineer</b> at <b>B3LAB (Cloud Computing &amp; Big Data Research Laboratory)</b> , 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 <b>EU-funded STORAIIGE</b> initiative by designing and optimizing <b>ML/DL models</b> to strengthen automation and decision-support, following a rigorous experimentation loop (baseline → improvement → evaluation). • Built repeatable data pipelines and transformed <b>10,000+ raw datasets</b> 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 <b>15% reduction</b> in error rates and a <b>25% increase</b> 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 <b>research/engineering</b> stakeholders.	

## PROJECTS

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### Ablacım 🌟, 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.
- Ablacım 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, etc.). 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,

*Autonomous Ground Rover*

09/2024

- 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

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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

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

## INTERESTS

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