Mehmet Baran Korkusuz

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EDUCATION

Middle East Technical University, *Ankara, Turkey* Oct 2019 - June 2024

B.S.: Computer Engineering

SKILLS

Programming Languages: Python, C, C++, Dart

Technologies: Flutter, Docker, ffi, Cloud & Devops , CI/CD, AI Assisted Development

Concepts: Object-Oriented Programming (OOP), Data Structures & Algorithms, Design Patterns

RELEVANT COURSEWORK

- **Algorithm Analysis**
- **Data Structures & Algorithms**
- **Machine Learning / Data Mining**
- **Software Engineering**

EXPERIENCE

Full Stack Developer | Everpixel, *Ankara, Turkey* June 2025 - Apr 2026

- Designed and shipped AI video-processing endpoints on a **FASTAPI/GPU** backend serving **~500**+ daily inference requests. Frame interpolation (**RIFE**), video super-resolution, **OpenAI Whisper** auto-captions, and MediaPipe-derived **ONNX face detection** flows.
- Built native C++ video engine integrated via Dart FFI for the Cutvibe mobile video editor app. Live on iOS/Android with **100k**+ store installs.
- Wrote unit and integration tests. Integrated into existing **Github Action CI/CD** workflows.

AI Engineer | DATABOSS, *Ankara, Turkey* Feb 2025 - April 2025

- Built a Retrieval-Augmented Generation (**RAG**) chatbot over PDF documents in the education domain. **LangChain** + **LangGraph** orchestration.
- Compared chunking and segmentation strategies to improve retrieval quality and answer grounding.
- Learned and internalized RAG principles and key points.

Software Developer | Valantic, *Ankara, Turkey* July 2022 - Nov 2022

- Contributed to a real-time payment engine for a major Czech bank. Focused on the Anti-Money Laundering component.
- Built automation scripts in Bash and Python on remote Linux environments.
- Cultivated teamwork capabilities and agile development skills

PROJECT EXPERIENCE

local_rag — Self-critique RAG chatbot

- RAG with self-critique loop (retrieve -> grade -> generate -> fact-grade -> re-query). **LangGraph** state machine. Local LLM via **Llamacpp** and **Vespa**.

yolo_car_counting — Real-time vehicle detection, tracking and counting.

- C++17 pipeline with producer/consumer threading, YOLOv8 (**OpenCV** DNN) detection, custom **BYTETrack** + **Kalman filter** for persistent IDs.

image_filter — Cross-platform mobile image filter (Flutter + native C++ via Dart FFI)

- **Flutter** app applying native C++ image filters via **Dart FFI** across Android and iOS.