

Osman Berkecan Yildirim

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SUMMARY

Junior AI Engineer focused on LLM systems, RAG pipelines, and production-ready applications. Demonstrated ability to build end-to-end AI products through academic and personal projects, including medical AI and semantic search systems. Proficient in Python, FastAPI, vector databases, and scalable backend design, with a strong foundation in software engineering principles.

EDUCATION

2020 – 2025 Bachelor's Degree — **Eskisehir Technical University**

Relevant Coursework: Artificial Intelligence, Machine Learning, Pattern Recognition, Data Structures & Algorithms, DBMS, Software Engineering.

WORK EXPERIENCE

Mergen Tech

Aug 2025 – Sep 2025

- Developed hospital FAQ chatbot with FastAPI and Streamlit, improving patient query response efficiency.
- Designed retriever pipeline processing 1k+ patient queries with low latency.
- Built keyword-based medical safety filters ensuring healthcare compliance.
- Delivered MVP chatbot with extensible RAG-ready architecture.

VakıfBank

Jun 2024 – Aug 2024

- Built credit calculation web app using .NET and Angular.
- Developed repayment module with 100% calculation accuracy in validation tests.
- Integrated RabbitMQ for async processing, improving throughput by 35%.
- Delivered interactive prototype for loan evaluation and repayment planning.

PROJECTS

DermaLens: AI-Powered Dermatological Assistant

Graduation Thesis

- Engineered CNN with TensorFlow achieving 90%+ skin disease classification accuracy, deployed via TensorFlow Lite.
- Built Flutter mobile app integrating AI model and Google Maps API for dermatologist navigation.

Nexus: Smart Documentation Buddy

Personal Project

- Built a production-grade RAG assistant with LangChain, FastAPI, and Ollama, enabling semantic search and natural language Q&A over technical PDF documents.
- Engineered conversation memory with LLM-based question reformulation, allowing context-aware follow-up queries across chat sessions.
- Developed a React + Vite frontend with real-time document ingestion (drag & drop), interactive querying, and source-cited responses with relevance scoring.

SKILLS

- Languages:** Python, C#, TypeScript, SQL
- AI & ML:** PyTorch, Hugging Face, TensorFlow
- Frameworks:** FastAPI, .NET, React
- Databases:** PostgreSQL, MongoDB, ChromaDB
- Tools:** Git, Docker, RabbitMQ, Linux