Abdulkadir İpek

Computer Engineering Student | AI Engineering: LLM Apps, RAG, Agents
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Summary

Final-year Computer Engineering student building AI products: RAG, evaluation and the software around the model. TEKNOFEST 2026 finalist; built Dugout, an open-source coding-agent orchestrator. Seeking AI engineering internships.

Projects

HititFinLex: Decision Support Platform for Participation Banking *2026*
TEKNOFEST 2026 AI Language Agents Competition, Finalist | Python, FastAPI, Next.js, PostgreSQL, pgvector, Docker

- Built, in a three-person finalist team, a platform that collects, classifies and compares card campaigns and financing products from 10 Turkish participation banks; collected and labeled the 3,351-document corpus (about 1M words) from bank websites.
- Fine-tuned transformer-based Turkish language models reaching 99.1% test accuracy for campaign classification, 91.2% for product classification and 0.87 F1 for 13-entity NER (on silver-labeled test data).
- Developed the FastAPI backend and a RAG assistant that searches 7,238 passages with hybrid BGE-M3 and BM25 retrieval and answers with cited sources using a local LLM (Ollama).
- Developed the Next.js interface, set up the Docker Compose environment and GitHub Actions CI pipeline, and wrote the project documentation.

Audio Splitter AI: Music Source Separation App *2026*
Python, PyTorch, Demucs v4, FastAPI, Next.js

- Built a web app that splits songs into 4 stems (vocals, drums, bass, other) with Meta's pretrained htdemucs_ft model and generates a 5th instrumental track.
- Wrote the FastAPI separation and file service and a Next.js interface for playing stems in the browser and downloading them individually or as a ZIP.

Image Classification Projects *2026*
PyTorch, MobileNetV2, EfficientNet

- Built a 15-class animal image classifier with transfer learning on MobileNetV2 (frozen backbone, new classification head), reaching 97.3% test accuracy on about 1,900 images after 10 epochs; also worked on dog breed classification with EfficientNet and dessert classification with a custom CNN.

Technical Skills

Languages: Python, C++, C#, TypeScript, JavaScript, SQL, PHP
Machine Learning: Deep Learning, PyTorch, TensorFlow, Keras, scikit-learn, Hugging Face Transformers, OpenCV, Pandas, NumPy
NLP and Generative AI: NER, Text Classification, RAG, LLMs (Ollama), Embeddings, Hybrid Search
Backend and Web: FastAPI, Next.js, React, Tailwind CSS, HTML, CSS
Data and Tools: PostgreSQL, pgvector, Docker, Git, CI/CD (GitHub Actions), Linux, Google Colab
Security (coursework): Kali Linux, Wireshark, Burp Suite, basic penetration testing

Education

Hitit University, Çorum, Türkiye *2023 – 2027 (expected)*
B.Sc. in Computer Engineering | GPA: 3.00 / 4.00

Leadership Experience

Project Committee President and Core Team Member, HSD Hitit (Huawei Student Developers) *2025 – 2026*

- Coordinated planning and delivery for student project teams as project committee president.
- Helped organize technical events and workshops for students.

Core Team Member, IEEE Hitit University Student Branch *2024 – 2025*
Member, Google Developer Student Clubs (GDSC) Hitit *2023 – 2024*

Certifications and Languages

- Supervised Machine Learning: Regression and Classification, DeepLearning.AI and Stanford University (Coursera)
- Ethical Hacking Specialist; Web Penetration Testing and Bug Bounty; Python for Ethical Hackers, Atıl Samancıoğlu, Academy Club
- Version Control with Git and GitHub (Udemy)

Languages: Turkish (native), English (B2, upper intermediate)