

Furkan Barış

machine learning for network security

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01 summary

Final-year computer engineering student working on machine learning for cybersecurity: one-class anomaly detection on medical-device network traffic, multimodal phishing detection, and retrieval-augmented generation. Comfortable in PyTorch and FastAPI, on real datasets, with results I can reproduce.

Seeking a mandatory internship – 40 business days, insurance covered by the university – in cybersecurity, machine learning, data engineering, or software development. Available in Istanbul, Ankara, Izmir, or remotely.

02 experience

Akgün Software – Software Engineering Intern

Summer 2026 · Trabzon, Turkey

- Contributed to backend and API development while supporting frontend implementation tasks.
 - Worked with relational databases and SQL queries to support application data operations.
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03 education

Karadeniz Technical University

2021–2026 · Trabzon, Turkey

- B.S. in Computer Engineering.
- All coursework completed; graduation pending completion of the mandatory internship.

04

selected work

anomaly-detection

2025-2026 · 0.97 acc

one-class intrusion detection for IoMT network traffic (thesis)

- Developed a CNN-DROCC one-class model for anomaly detection in Internet of Medical Things network traffic.
- Achieved 0.92 accuracy on CIC-IoMT-2024 and 0.97 on WUSTL-EHMS-2020.

PyTorch · CNN-DROCC · Python · CIC-IoMT-2024 · WUSTL-EHMS-2020

phishfusion

2025-2026 · 0.96 acc

multimodal QR code phishing detection

- Engineered a three-branch neural network combining a Transformer lexical encoder with URL and QR structural features.
- Achieved 0.96 binary classification accuracy on an imbalanced phishing dataset.

PyTorch · Transformer · MLP · Cross-Modal Attention

docrag

2026

multi-user document RAG platform

- Built a multi-user document RAG application with secure PDF, DOCX, and URL ingestion; hybrid retrieval, reranking, and source-cited Gemini responses.
- Implemented JWT authentication, capsule-level data isolation, background ingestion workers, persistent chat history, automatic capsule summaries, and continuation handling for long LLM outputs.

FastAPI · PostgreSQL · Redis · Qdrant · Gemini · Google Cloud

05

skills

languages	Python · C · C++ · Bash · Java · SQL · JavaScript
ml / deep learning	PyTorch · CNNs · Transformers · MLPs · LLMs
parallel computing	MPI
data & analysis	NumPy · Pandas · scikit-learn
security & networks	Wireshark · Burp Suite · Metasploit · Nmap
devops & tools	Git · Docker · Linux

turkish	Native
english	B2