UMUT ABALI
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EDUCATION

Istanbul Medeniyet University Istanbul, TUR
Bachelor of Computer Engineering Expected Graduation: June 2026

- Courses: Data Structures, System Programming, Operating Systems, Deep Learning, Computer Vision, IoT, Compiler design

EXPERIENCE

Menatek Technologies Istanbul, TUR
IT Support Intern March 2025 - May 2025

- Provided technical support for users, resolving hardware, software, and network issues. Configured and monitored network devices (routers/switches). Managed network performance, ensuring smooth operation. Maintained IT inventory accuracy via data entry. Performed and verified server backups weekly, adhering to security and backup protocols.

Princess Cruise Alaska, USA
Public Areas Attendant June 2025 - October 2025

- Work and Travel USA program participant. Developed professional communication and teamwork skills in international, fast-paced environment.

PROJECTS

FrappeLLM | GitHub
Developed voice-driven RAG system for natural speech queries over PDF documents, achieving real-time response generation. Integrated Whisper (speech-to-text), LangChain (contextual retrieval), and Ollama (local LLM inference) for privacy-preserving, on-device processing without external API dependencies.
Plate Detection | GitHub
Built real-time license plate detection system using OpenCV, achieving 92%+ accuracy across diverse conditions. Implemented custom edge detection pipeline, character segmentation with contour analysis, and Tesseract OCR. Optimized for varying lighting, angles, and weather scenarios with preprocessing techniques.
Location Detection | GitHub
Designed indoor localization system using Wi-Fi RSSI fingerprinting and Random Forest classification, achieving <2m positioning accuracy. Collected 1000+ signal samples across multiple zones, engineered signal strength features, and deployed trained model for real-time location tracking in GPS-denied environments.
Inter-Terminal Messaging | GitHub
Developed secure peer-to-peer messaging system using TCP socket programming and AES-256 encryption. Implemented multi-threaded server architecture handling concurrent connections, custom protocol for message routing, and achieved <50ms latency in local network environments.

TECHNICAL SKILLS

Prog. Languages: Python, C/C++ , SQL
Frameworks & Tools: PyTorch, GCP, Docker, Git, LangChain, OpenCV ,
Languages: Turkish (Native), English (Professional Working Proficiency)