MERVAN AKSU

Computer Engineering Student · Software Developer

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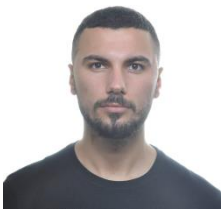

PROFESSIONAL SUMMARY

Computer Engineering student at Sakarya University with internship experience in enterprise IT infrastructure (data backup, disaster recovery, data center storage). Builds software end to end, from multithreaded C++/Qt and OpenCV applications on Linux to FastAPI/React web apps and machine learning pipelines, and ships them with tests and clear documentation. Interested in computer vision, industrial software and applied AI; a fast learner with strong communication skills and a collaborative mindset.

EXPERIENCE

Aktek Bilişim (Akkök Group) – Professional Services Intern — Aug 2026 – Sep 2026

- Took part in daily backup operations for company data using Veeam.
- Worked on disaster recovery scenarios, helping prepare and review recovery steps for business continuity.
- Allocated storage space from the company data center to business units in a VMware virtualized environment.

EDUCATION

Sakarya University – Bachelor's Degree in Computer Engineering — 2022 – Present

TECHNICAL SKILLS

Languages: C++17, C, Python, Java, C#, TypeScript / JavaScript, Dart, SQL, Pine Script
AI / ML: PyTorch, TensorFlow / Keras, scikit-learn, Hugging Face Transformers (FinBERT), NLP, RAG
Backend & Web: FastAPI, ASP.NET Core MVC, Supabase Edge Functions, Entity Framework Core, React, Next.js
Desktop, Vision & Mobile: Qt 6 (Widgets, Signal/Slot, QThread), OpenCV, Flutter, Windows Forms
Data: PostgreSQL (RLS, pg_cron), Supabase, SQLite, SQL Server, SQLAlchemy
IT Infrastructure: Veeam Backup & Replication, VMware, Disaster Recovery, Data Center Storage Allocation
Tools: Git, GitHub Actions, Docker, CMake, Make, GoogleTest, pytest, Linux
Spoken Languages: Turkish (Native), English (Upper-Intermediate)

PROJECTS

- **QT-Defect-Inspector** *(C++17, Qt 6, OpenCV, CMake, Linux)*: Real-time camera monitoring and fabric defect detection app. Capture and processing run on separate QThreads linked by a bounded producer–consumer queue (std::mutex, condition_variable); OpenCV detection (~2 ms/frame); results are published as JSON Lines over TCP/UDP to C++ and Python receivers. 109 tests (GoogleTest, Qt Test) and CI with ASan, UBSan and TSan.
- **FinSight AI** *(Python, FastAPI, React, TypeScript, PostgreSQL, Docker)*: Explainable financial analysis platform for SEC 10-K / 10-Q / 8-K filings. Extracts XBRL financials and ratios, runs sentence-level FinBERT sentiment analysis, compares risk factors across years and answers questions with cited sources (RAG).
- **Halısaha** *(Flutter, Next.js, TypeScript, Supabase)*: Football pitch booking platform with a mobile app for players and a web panel for venue owners; PayTR deposit payments, PostgreSQL row-level security and tests.
- **TradingBot** *(Pine Script v6, Python)*: Rule-based ICT / MMXM research strategy for NQ and ES futures with risk-based position sizing and documented backtests.
- **Other Projects:** ML projects with scikit-learn, Keras and PyTorch (CNN, NLP, transfer learning); TarSau, a CLI archiver in C; OOP simulated in C with function pointers; OS scheduling simulator (Java, team of 5); fuzzy fuel-injection controller (Java, jFuzzyLogic); hospital management web app (ASP.NET Core MVC).