



Haktan Polat

Final-year student in the dual-degree Automated Systems and Computer Engineering program (Polytech Angers and Galatasaray University), seeking a **final-year internship** in **artificial intelligence** engineering, **software development**, or **data engineering** starting **March 2027**, for a minimum of 6 months. Experience in **AI agents**, **applied AI**, **backend development**, and **data architectures**, gained both in industry and academic research.

PROFESSIONAL EXPERIENCE

AI Engineer (Part-time, alongside studies)

avsos · Istanbul, Turkey

Sept. 2025 – June 2026

- Built a fully **agentic AI** system that ran airline operations on its own, integrated with **flight data** to reroute overbooked flights and flights to airports not open 24/7 before they were delayed
- Developed the **backend** of a **RAG (Retrieval-Augmented Generation)** chat assistant over the company's internal documentation, with vector search on **PGVector** to retrieve the relevant documents and ground the answers in them
- Services in **Java** and **Spring Boot**, LLM integration and **tool calling** through **Spring AI**, **REST** and **GraphQL** APIs, **PostgreSQL/PGVector** and **Docker**; planned a migration to **LangChain/LangGraph**

Student Researcher

Polytech Angers · Angers, France

Apr. – June 2025

- Weather forecasting program based on **Federated Learning**, in partnership with **Galatasaray University** and the **University of Corsica**
- Compared XGBoost, linear regression, **neural networks**, decision tree and random forest

Information Systems & Management Intern

Denizbank A.Ş. · Istanbul, Turkey

July 2024

- Developed skills in **SQL** and **database** management; contributed to automating the bank's official monthly reporting process

EDUCATION

Polytech Angers, Graduate School of Engineering, University of Angers

Angers, France

Sept. 2024 – Aug. 2027 (expected)

Engineering Degree (Bac+5, Master's level), Dual Degree in Automated Systems and Computer Engineering

Galatasaray University

Istanbul, Turkey

Oct. 2021 – June 2026

Bachelor's Degree, Computer Engineering · Senior thesis: probabilistic football prediction (ML)

PUBLICATION

Hybrid Batch and Streaming Data Architecture for Air Quality Monitoring in Smart Cities: A Case Study on Istanbul Using Azure Lakehouse ([link](#), page 302)

ICADA 2026

- Designed a **Medallion architecture (Bronze/Silver/Gold)** on **Azure Lakehouse**; batch and streaming pipelines for real-time data processing
- Developed a **Random Forest** model for air quality prediction (Istanbul case study)

PROJECTS

Probabilistic Prediction of Football Match Results Using Machine Learning

Senior thesis, Galatasaray

2025 – 2026

- Probabilistic prediction of French **Ligue 1** matches (Home/Draw/Away), trained on **32 seasons, 11,541 matches**, and 5 data sources
- Reduced 96 features to 13 through a systematic **ablation study** (pi-ratings, market-implied probabilities, recent form)
- Compared 4 models (**Logistic Regression**, **Random Forest**, **XGBoost**, **CatBoost**) and an ensemble, validated via **Time-Series Split** over 5 test seasons
- RPS of 0.2031**, within 2% of the betting market benchmark (Pinnacle); built only with public data and open-source tools

Zeki: AI Assistant for Safari [getzeki.app](#) · App Store ID [6789061053](#)

Personal project

Apr. 2026 – Present

- Solo-developed and published on the **App Store**; « **bring-your-own-key** » architecture (Claude, GPT, Gemini), keys stored in **Apple Keychain**
- iCloud** sync, data sharing via **App Groups**, **Siri** and Shortcuts integration

Mergen

Personal project · Istanbul

May – Dec. 2025

- Chess AI inspired by Turkic mythology, built in **C++** and **Python**; real-time move analysis, positional evaluation, custom move-selection logic; open source (GitHub)

TerraQuest

Google Solution Challenge 2024 · Istanbul

Feb. 2024

- Android** app raising climate change awareness, built as part of a team

CONTACT

Angers, France

Open to relocation

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SKILLS

Programming Languages

Python, Java, C, C++, C#, Swift, TypeScript, JavaScript, PHP

Frameworks & Environments

Spring Boot, Spring AI, Docker, MATLAB, Scilab, Linux

AI & Machine Learning

Machine Learning, Generative AI, AI Agents, Tool Calling (Function Calling), RAG (Retrieval-Augmented Generation), LLM Integration, scikit-learn, XGBoost, CatBoost, Random Forest, Logistic Regression, Neural Networks, Federated Learning, Operations Research, Statistics, Probability

Data, Cloud & Systems

SQL, PostgreSQL, PGVector, REST & GraphQL APIs, Advanced Databases, Data Structures & Algorithms, Object-Oriented Programming, Distributed Systems, Computer Networks, Cybersecurity, Compilers, Cloud Computing, Azure Data Factory, Azure Databricks, Delta Lake, PySpark, Power BI, Data Visualization, IoT

Soft Skills

Autonomy, Teamwork, Leadership, Cross-cultural Adaptability

LANGUAGES

Turkish: native

French: DELF B2 (July 2026)

English: B2

INTERESTS

Extracurricular Involvement

hp.maps: content creator, cartography & international politics (Instagram, since 2019); Chair of the Audit Committee, Galatasaray University International Politics Club (2022-2026)

Sports

Cycling, Running

Hobbies

French music, Cooking, Origami, Simulation games (War Thunder, Cities Skylines, Euro Truck Simulator)