# Can **Yalnız**

DATA SCIENTIST · AI ENGINEER

*Turin, Italy · Open to relocation*

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## PROFILE

Data scientist and AI engineer with an M.Sc. in Data Science and Engineering from Politecnico di Torino (2026), on a foundation in computer engineering. Works across the stack, from statistical modelling and machine learning to production LLM systems. As founding AI engineer at LetsSellApp, wrote the company's AI orchestration logic on Azure OpenAI and helped integrate it into the FastAPI backend. Thesis research built DCC–eGARCH time-series models for financial risk and uses them to train reinforcement learning hedging agents; it also produced a fix to the R package *rmgarch* that was merged upstream. Comfortable close to the hardware too (neural network inference in C for an FPGA accelerator), and experienced in taking products from 0 to 1 in startup teams.

## EXPERIENCE

### LetsSellApp

FOUNDING AI ENGINEER — *Jan 2026 – May 2026*

- Wrote the AI orchestration logic on Azure OpenAI and helped integrate it into the company's FastAPI backend, serving a diverse customer base, as the company's first and only AI engineer.
- Worked directly with the shareholders through product iterations as the company adapted to rapidly changing market demand.

### Freelance

AI SOFTWARE DEVELOPER — *Sep 2023 – Nov 2023*

- Built a web-app prototype of an AI language tutor and conversation partner, with conversations driven by custom prompts and LangChain on top of Large Language Models.
- Designed the user experience to give frictionless access to the AI features.

### LLM security venture (R&D stage)

CO-FOUNDER — *Sep 2022 – May 2023*

- Developed, with two colleagues, a product for the cybersecurity industry built on recent advances in Large Language Models.
- Extended the Hugging Face Transformers libraries (PyTorch) where needed to customise the workflow, running on in-house hardware with a focus on resource efficiency.

### Freelance

TEST ENGINEER — *Oct 2022 – Nov 2022*

- Wrote automated tests to validate the C++ firmware codebase of an embedded systems project, in a small engineering team.

### IEEE-HKN Mu Nu Chapter, Politecnico di Torino

HUMAN RESOURCES ASSISTANT — *Oct 2019 – Sep 2020*

- Reformed member feedback collection and built SurveyKN, an open-source reporting tool that automates the processing and analysis of the biannual member survey data, cutting report generation from days to minutes (github.com/MuNuChapterHKN/SurveyKN).

### Infineon / Politecnico di Torino

RESEARCH ASSISTANT — *Apr 2019 – Sep 2019*

- Developed machine learning regression models to support quality control for Infineon, under the supervision of Politecnico di Torino faculty.

## EDUCATION

### Politecnico di Torino
*Turin, Italy*

M.Sc. in Data Science and Engineering — *2026*

- Thesis, in collaboration with Teoresi: *Design, implementation and evaluation of a reinforcement learning agent for dynamic portfolio hedging using DCC–eGARCH simulations*.
- Relevant courses: Financial Engineering, Decision Making and Optimization, Network Dynamics, Machine Learning for IoT.

### Politecnico di Torino
*Turin, Italy*

B.Sc. in Computer Engineering — *2022*

### Harvard University
*Cambridge, MA, USA*

Summer School, Theoretical Physics — *2014*

## PROJECTS

### Thesis research: reinforcement learning for portfolio hedging Teoresi

- Modelled multivariate financial time series in R with DCC–eGARCH and used the fitted models to simulate training data for reinforcement learning.
- Built custom Python environments for training model-informed hedging policies for risk management.
- Traced simulated multivariate Student-t and Laplace innovations that were silently coming out Normal to an RNG-state bug in the R package *rmgarch*; fixed it and the fix was merged upstream (PR #7).

### CapsNet inference FPGA accelerator github.com/canyalniz/CapsNet-in-C

- With two colleagues, built an FPGA accelerator for CapsNet; implemented the deep learning algorithms in C from scratch as the reference for the hardware implementation, and explored design choices to fit the available compute resources.

### CNN-Inference-Didactic github.com/canyalniz/CNN-Inference-Didactic

- Open-source convolutional neural network inference library written in C from scratch, with a Keras interface that generates C code for sequential models.

## SKILLS

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|---|---|
| **ML & Stats** | Time-series and volatility modelling, optimisation, scikit-learn, PyTorch, TensorFlow, Keras, TFLite |
| **LLMs & AI** | Azure OpenAI, LangChain, Hugging Face Transformers, prompt engineering, AI orchestration |
| **RL** | Gymnasium, Stable-Baselines3, CleanRL, Ray/RLlib, FinRL |
| **Data & Backend** | SQL, PostgreSQL, Redis, Spark, Hadoop, FastAPI, Nginx, Gunicorn, Uvicorn |
| **Programming** | Python, R, C, C++, MATLAB, JavaScript, Bash, Java |
| **Languages** | English: full professional proficiency (C2) · Italian: intermediate (B1) |