Francesco Pio De Dominicis

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Turin, Italy

Education

Politecnico di Torino — Turin, Italy
M.Sc. in Computer Engineering – Specialization: AI & Data Analysis — *2024 – Present*

Università degli Studi di Salerno — Salerno, Italy
B.Sc. in Computer Engineering (Final Grade: 109/110) — *2021 – 2024*

- **Thesis:** ROAM: Development and implementation of a cross-platform software for managing and controlling heterogeneous robot fleets.

Experience

Generative AI Engineer - Intern — March 2026 – Present
Accenture — *Turin, Italy*

- Architecting and deploying conversational agents and orchestration workflows leveraging **LangChain** and **LangGraph**.
- Collaborating within an agile, fast-paced technical environment to bridge the gap between complex software engineering models and domain-specific systems.

Software Engineer - Intern — June 2024 – August 2024
Youbiquo — *Cava de' Tirreni, Italy*

- Engineered a cross-platform mobile application using **Dart** and **Flutter** integrated with **OpenRMF** to enable real-time teleoperation, telemetry monitoring, and command dispatching for heterogeneous robot fleets.

Football Referee — 2017 – Present
A.I.A. - FIGC — *Campania & Piedmont, Italy*

- Enforce regulations and manage on-field match dynamics under tight time constraints, coordinating communication with assistant referees to resolve high-pressure conflicts and make critical split-second decisions.

Projects

Mask Architecture Anomaly Segmentation for Road Scenes | ***Python, PyTorch***

- Authored a scientific research paper focused on an open-world semantic segmentation framework for autonomous driving systems utilizing **Mask2Former** (EoMT) and a custom dynamic Outlier Exposure pipeline.
- Implemented memory-efficient **Gradient Accumulation** strategies to successfully train and validate large Transformer architectures on resource-constrained development hardware.

Ruggine | ***Rust, gRPC, PostgreSQL, Sled, Tokio, JavaScript***

- Architected a stateful **Rust/Tokio** chat system leveraging **gRPC over HTTP/2** (Protobuf) for bidirectional streaming. Engineered a **PostgreSQL** historical storage schema, a lock-free **Sled** local cache, and **TLS 1.3/Argon2** security.

File Portal | ***Kotlin, TypeScript, HTML, CSS***

- Architected a scalable **Spring Boot** microservices infrastructure via **Kafka** for secure, multi-user file management and an **AI**-powered document processing pipeline.
- Implemented full-stack system observability with **OpenTelemetry**, **Prometheus**, **Grafana**, and **Langtrace**, alongside automated storage cleanup for high performance.

Technical Skills

Programming Languages: Python, Rust, C, Kotlin, TypeScript, JavaScript, Dart, ARM Assembly, Java, SQL
AI / ML: LangChain, LangGraph, Ollama, Computer Vision, Deep Learning, XAI, PyTorch, TensorFlow, Data Analysis
Frameworks & Tools: Docker, Git, PostgreSQL, SQLite, Redis, MongoDB, Kafka, Apache Spark, Kubernetes, Terraform, Microsoft Azure
Languages: Italian (Native), English (C2 - Proficient)