

Antonio Rubino

✉ antonio.rubino03@icloud.com

📍 Rome, Italy

🌐 antoniorubino.me

🐙 github.com/tonyrub3

🌐 LinkedIn



Education

- 2025 – Present 📖 **Sapienza University of Rome - M.Sc. in Computer Science and AI Engineering.**
Currently enrolled. Expected graduation: 2027.
- 2021 – 2024 📖 **University of Parma - B.Sc. in Computer Science.**
Graduated in 2024.
Thesis: *Integration and optimization of a cognitive rehabilitation system with the NAO robot and AI for emotion recognition.*
- 2016 – 2021 📖 **Liceo Scientifico Internazionale "Gaetano Rummo", Benevento.**
Scientific High School Diploma. International curriculum with a strong focus on English language development.

Projects

- 2025 – Present 📖 **B2B Process Automation & Multi-Tenant SaaS Platform.** GitHub
Full-stack platform designed to automate SME workflows, including e-commerce operations, real-time appointment scheduling, and customer communication via WhatsApp. Built a Python/Flask API, Next.js frontend, and SQLAlchemy database-per-tenant isolation layer. Integrates a self-hosted local AI framework with agentic task routing (Ollama/OpenAI), local vector RAG, and PII masking for data confidentiality. Orchestrates Google Calendar OAuth sync, WooCommerce webhook integration, Redis Queue background workers, and real-time SSE.
- 03/2026 📖 **Hackathon Codemotion: Truth Engine – Explainable Fact-Checking Platform.**
Full-stack project for automated fact-checking combining web retrieval, LLM-based query planning, claim decomposition, cross-checking, and evidence scoring with transparent sources and pipeline traceability.
- 2025 📖 **Event-Driven Microservices E-Commerce Platform.** GitHub
High-performance .NET 8/C# backend with three bounded contexts (Order, Payment, Warehouse), each with dedicated PostgreSQL instances (database-per-service pattern). Implemented Transactional Outbox pattern for guaranteed Kafka event delivery, hybrid sync HTTP + async Kafka communication, and centralized exception handling.
- 2026 📖 **NLP Semantic Search Engine – Two-Stage Retrieve-and-Rank Pipeline.** GitHub
Built a two-stage retrieval system ($k=30$) with custom trainable Attention Pooling layer, Multiple Negatives Ranking Loss (MNRL), and teacher-student hard negative mining. Stack: PyTorch, Transformers, Sentence-Transformers, BGE Reranker.
- 📖 **Machine Learning University Projects.** GitHub
Classification, regression, clustering, and dimensionality reduction. Mitigated GTZAN data leakage using StratifiedGroupKFold on song_id. Comparative analysis of PCA vs. dense Autoencoders. Stack: Scikit-Learn, TensorFlow.
- 2024 📖 **PlatinumWings – Private Jet Booking & ERP System Design.** GitHub
Feasibility study and UX/UI design (Figma) for a luxury flight booking engine. Covered CapEx/OpEx analysis, cloud sourcing evaluation, competitive benchmarks, and full system architecture mapped across Anthony's Pyramid.

Projects (continued)

2026



Portfolio Website.

antoniorubino.me

Personal portfolio built with Next.js, deployed on Vercel.

Skills

Languages	Java, C, C++, Python, Go, Assembly, JavaScript, TypeScript, HTML5, CSS3, Shell, SQL.
Frameworks	Flask, .NET 8/ASP.NET Core, Spring Boot, React, Next.js, Node.js, GraphQL, SQLAlchemy, Alembic.
AI / ML / NLP	PyTorch, TensorFlow, Scikit-Learn, Sentence-Transformers, OpenAI API, Ollama.
Cloud & DevOps	Linux (Ubuntu/Debian), Docker, Docker Compose, Kubernetes, Ligo, Apache Kafka, Redis, GitHub Actions, GitLab CI/CD.
Tools	Git, Postman, Figma, Rancher, Swagger/OpenAPI, Jupyter, Adminer.
Spoken Languages	Italian (Native); English (B2, Cambridge Certified).
Certifications	EIPASS; Cambridge English B2.