

Stefano Roy Bisignano

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Overview

AI Engineer focused on Large Language Models (LLMs) and cutting-edge machine learning techniques. Experienced in fine-tuning, deployment, and optimization of AI systems for real-world challenges. Passionate about building impactful solutions that bridge AI and industry needs.

Skills

- **Programming Languages:** Python, C++, Rust, Java, JavaScript, SQL
- **AI Frameworks:** PyTorch, TensorFlow, Hugging Face, scikit-learn
- **Machine Learning:** Fine-tuning LLMs, NLP, Computer Vision, Model Optimization
- **Tools:** Docker, Kubernetes, Git, FastAPI, OpenAI API, Skyscanner API, Revolut API
- **Soft Skills:** Problem Solving, Technical Leadership, Cross-functional Collaboration

Experience

- AI Engineer**, Simplex Rapid, Milano, Lombardia May 2024 – Present
- **Fine-tuning LLMs:** developed custom language models for technical translations in mechanical engineering, achieving a 18% boost in accuracy.
 - **LLMOps Pipelines:** designed robust pipelines for deployment, monitoring, and updates in production.
 - **Collaboration:** aligned AI solutions with business goals, working closely with cross-functional teams.
- AI Engineer Intern**, Sentric, Reggiolo, Emilia Romagna Nov 2023 – Feb 2024
- **Data Preparation:** processed datasets for fine-tuning OpenAI APIs in legal and industrial domains.
 - **Performance Optimization:** improved model throughput and reduced latency by fixing bottlenecks.
 - **Impact:** contributed to scalable AI solutions, speeding up delivery for client projects.

Projects

- OnlyFly (HackUPC 2025)**, Universitat Politècnica de Catalunya, Barcelona 2025
- **Results:** ranked 4th out of 150+ international teams in the Skyscanner challenge.
 - **Project Scope:** built an AI-powered home exchange platform that helps users travel the world while eliminating accommodation costs.
 - **Key Features:** intelligent matching engine based on user preferences, personalities, and interests; Skyscanner API for flights; Revolut API for payments; sustainability insights.
- PostGenius (Hackathon)**, GenAI.Works 2024
- **Results:** ranked 7th out of 4,500 participants from 80 countries.
 - **Project Scope:** built an AI-powered tool for multimedia content generation using Retrieval-Augmented Generation (RAG) and NLP.
 - **API Integration:** integrated OpenAI, Vectara, and RunwayML APIs to deliver accurate on-demand content.
- Self-Supervised Learning for RCC Classification** 2025
- **Description:** investigating SSL methods (SimCLR, MoCo, Rotation, JEPa) to extract representations from histopathological WSIs and automatically differentiate RCC subtypes without annotations.
- Affordance 3D Highlighting** 2024
- **Description:** inspired by 3D Highlighter (CVPR 2023) and CLIP, exploring zero-supervision localization of functional regions on 3D objects via language prompts.

Education

- MEng in Artificial Intelligence and Data Analytics**, Politecnico di Torino, Italy 04/2024 – 12/2025
- BSc in Computer Engineering**, Politecnico di Torino, Italy 10/2020 – 04/2024