

# Raffaello Fornasiere

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## Summary

I am a software engineer with applied experience in full-stack development and academic experience in AI/ML. I have built web applications and integrated LLM features into production-ready systems. I aim to deliver a strong user experience and ensure high-quality, maintainable, and scalable software.

## Professional Experience

**AI Agent Developer**, Freelance (May 2025 - Present)

- Building an intelligent AI agent application with conversation management, tool integration, and persistent memory using event-driven architecture, FastAPI, and Anthropic Claude models.

**Lead Front-End Engineer**, Infiniteloop (October 2022 - Present)

- Designed and maintained front-end architecture using Angular, to ensure seamless integration with JHipster framework by implementing a side-by-side approach to combine generated and custom code, to enable maintainability and flexibility during system upgrades.
- Integrated LLMs into healthcare applications to automate medical report generation.
- Regularly implemented APIs and back-end features.
- Mentored two junior developers and promoted best practices to improve code quality and team collaboration.

**Junior Full Stack Developer**, Prodigys Group (July 2021 - September 2022)

- Developed and maintained both front-end and back-end components using Angular, Spring Boot, and Django.
- Improved database performance through SQL query refactors and workflow optimizations, to reduce execution times from hours to minutes

## Education

**Master's in Computer Science and Engineering**, Politecnico di Milano (Graduated July 2024)

- Thesis: Exploring the Potential of Lightweight LLMs for Medication and Timeline Extraction.
- Developed a web application to validate the thesis research, **currently being tested in three Italian hospitals**

**Bachelor's in Electronics Engineering**, Università degli Studi di Udine (Graduated July 2020)

- Thesis: Optimization of Digital Circuit Propagation Times Using Genetic Algorithms.

## Technical Skills

**Languages:**

- Mostly used: Python, Typescript, Java.
- Also familiar with: C, C++, SQL.

**Web Development Technologies:**

- Back-end: Spring Boot, Django, FastAPI, JHipster.
- Front-end: Angular, Vue.js, Tailwind, Bootstrap.

**ML & AI:**

- LLMs & NLP: Practical experience with large language models, text extraction, and information retrieval.
- Academic experience with various AI/ML and data science techniques, including neural networks (CNNs, RNNs, transformers), regression, clustering, dimensionality reduction, and optimization methods.
- Libraries & Tools: PyTorch (basic), TensorFlow, Scikit-Learn, Llamacpp, Langchain.

**Other Tools:** Docker, Git, REST APIs.

## Academic Projects

**Image Classification with CNNs**

- Two academic projects in a Deep Learning course. Explored and applied deep learning techniques to grasp the basics of neural networks.

**Caption-Image Matching with Transformers**

- Reimplemented the CLIP model for medical image-caption matching to understand model architecture and functionality.

**Online Learning for Pricing in E-commerce**

- Explored online learning techniques to optimize dynamic pricing models in simulated e-commerce scenarios.

## Publications

- Medical Information Extraction with Large Language Models (<https://aclanthology.org/2024.icnlp-1.47/>)  
Authors: **Raffaello Fornasiere**, Nicolò Brunello, Vincenzo Scotti, Mark Carman.

## Other Experiences

**ML4Good Bootcamp**

- Completed EPFL's iteration of the ML4Good AI Safety and ML Bootcamp (February 2023).