Nicola Ricci Maccarini

Software Developer

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EDUCATION

University of Ferrara   September 2022 - Current
B.S. Computer Science

WORK EXPERIENCE

Gescad S.p.A | *Software Developer*   June 2023 – November 2023

- Restructured comprehensive management tools that enabled third-party operators to monitor equipment statuses in real-time; findings led to targeted solutions addressing the two primary causes of prolonged system downtime.
- Collaborated closely with two senior developers on optimizing management systems through refactoring techniques achieving cleaner codebases while ensuring functionality was not compromised throughout development cycles.
- Partnered with one other developer to revamp the primary product display interface; enhanced user experience by reducing load times by 30% while streamlining machinery management throughout all production phases.

PROJECTS

wAIsteless - AI-Powered Culinary Assistant

AI, Python, FastAPI, Ollama, PHP, Laravel, Javascript, HTML, CSS, MySQL, Git, VS Code   March 2025

- Developed an AI-driven web application that generates personalized recipes based on available refrigerator ingredients, reducing food waste and optimizing meal planning.
- Engineered a virtual refrigerator management system, allowing users to track, organize, and monitor food expiration and quantities in real-time.
- Implemented a custom AI model fine-tuned on RecipeNLG (2M+ recipes) using Llama3.2 via Ollama, enabling efficient and privacy-focused offline recipe generation.
- Designed a responsive frontend using JavaScript, ensuring an intuitive and engaging user experience across devices.
- Built a scalable backend with Laravel and MySQL, optimizing data handling and API interactions for seamless performance.
- Integrated FastAPI-based AI services, leveraging a Python-powered pipeline for data preprocessing and model inference.

Database Course Project

Python, Pandas, PHP, HTML, CSS, MySQL, MySQL Workbench, Git, VS Code   July 2024

- Partnered with another student to create an interactive web application for accessing comprehensive data about a local museum, which played a pivotal role in earning an impressive final grade of 4.0 GPA.
- Developed an efficient web platform connecting to the museum's database using Python scripting and PHP server-side programming
- Maximized operational performance by introducing systematic methods for analyzing substantial quantities (around 49K+) diverse dataset entries leading to enhanced end-user experience due directly to reliable information access post-cleansing stage.

MMc queue

Python, Tkinter, Simpy, Plotly, Git, VS Code   November 2023

- Developed a robust simulation of a multi-channel queue system with variable inter-arrival times, generating 500+ data points for analysis; findings contributed to improved staffing strategies and reduced wait times for customers.
- Created detailed graphs employing the Plotly library that represented complex data sets from simulations; improved analysis efficiency by 20% while reducing time spent on manual graph creation.
- Designed a robust GUI with Tkinter that simplified data entry processes; decreased the time required to input parameters for software engineers involved in simulations.

EXTRACURRICULAR ACTIVITIES

Cassini Hackathon - 3th place Italian Category	May 2025
ItaCPC Challenge	October 2024
Reply Challenge	March 2024

SKILLS

- **Fluent in:** Python, C, Java, JavaScript, TypeScript, PHP, MySQL
- **AI & Machine Learning, Algorithms and Data Structures, Relational Databases, Functional Programming, Management Programming, Competitive Programming**