

DOMENICO FERRARO

Software Engineer

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WORK EXPERIENCE

Software Engineer

Jan 2022 – Present

Aucta Cognito

Java, Spring, Go, TypeScript, SQL, Docker, Ansible

- Designed and implemented customer-facing features by engineering REST APIs and algorithms across 10+ distributed microservices running on Docker containers.
- Led the design of 8+ Java microservices and software components, increasing system reliability by 60% through design patterns, best practices and maintainable code.
- Enhanced test automation increasing integration testing coverage by 40% through automated, blackbox and unit testing.
- Built modular front-end features using HTML, CSS, and TypeScript, ensuring top reusability and maintainability.
- Authored documentation, guides and developer tools, saving developers 15 hours weekly, by identifying areas for improvement and technical enhancements.
- Owned and engineered new scaling and backup methods for MySQL, yielding a 70% performance enhancement.
- Coordinated software development life cycle tasks and code reviews, consistently meeting a high on-time delivery rate.

EDUCATION

M.Sc. in Computer Science – GPA: 4.0/4.0

Sep 2021 – July 2024

University of Pisa, Italy

Main coursework: Distributed Systems, Data Mining, Compilers, Interpreters, Algorithm Design, and Advanced Algorithms.

B.Sc. in Computer Science – GPA: 3.6/4.0

Sep 2017 – May 2021

University of Pisa, Italy

Main coursework: Data Structures, Algorithms, Object-Oriented Programming (OOP), Operating Systems, Databases, Computer Architectures, Discrete Math, Probability, Operation Research, Calculus and Linear Algebra.

Computer Science Erasmus Student – One year of study abroad

Sep 2019 – May 2020

University College of Dublin, Ireland

Main coursework: Artificial Intelligence, Machine Learning, Computer Networking and Software Engineering.

PROJECTS

NetpipeFS – C

github.com/domferr/netpipefs

Developed a multi-threaded file system, to provide a new POSIX-compliant inter-process communication technique.

MicroC compiler – OCaml, LLVM

github.com/domferr/micro-c-compiler

Developed a compiler, outperforming Clang by 30% in separate compilation capabilities.

Front-end development – React, NextJS, Javascript, CSS, Bootstrap

ferrarodomenico.com

Designed a responsive website achieving top performance through Server-Side Rendering and CSS optimisation.

Wi-feye - Full-stack, University group project – Docker, React, NextJS, Typescript, CSS

github.com/wi-feye

Represented 12 students at public events, engineered architecture with 6 microservices and awarded the best grade.

OPEN SOURCE CONTRIBUTIONS

GSettings, library by Canonical – Dart

github.com/canonical/gsettings.dart

Implemented a missing feature and eliminated redundant computations resulting in optimised performance.

GSnap, GNOME extension – Javascript

github.com/GnomeSnapExtensions/gSnap

Architected a new feature and modernised the user interface of a GNOME extension with 13,000+ downloads.

SKILLS

Programming Java, C++, C, Javascript, Typescript, Bash, Python, OCaml, Dart, SQL.

Technologies Spring Boot, Docker, React, NextJS, HTML, CSS, Bootstrap, Flutter.

Tools Git, Jira, Confluence, Jenkins, Prometheus, Grafana, Loki.

Methodologies Design Patterns, Agile Methods, SOLID Principles, Test Driven Development (TDD), Unit Testing.