

Alessio Celentano

SOFTWARE ENGINEER

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Education

University of Ferrara

B.S. IN COMPUTER SCIENCE

110/110 cum Laude (GPA equivalent: 4.0/4.0 with distinction)

Erasmus+ Exchange at University of Murcia

Ferrara, Italy

September 2022 - March 2026

Work Experience

University of Ferrara

RESEARCH TRAINEE

- Designed and implemented a high-performance NLP pipeline to perform text classification benchmarks on High-Performance Computing (HPC) resources, integrating Ollama and Hugging Face for model retrieval.
- Trained ensemble learning models (XGBoost, Random Forest, AdaBoost) utilizing HPC resources, leveraging compute-intensive partitions to execute large-scale hyperparameter tuning using Random Search.
- Authored multiple Jupyter Notebooks to visualize benchmark results and wrote comprehensive documentation to facilitate knowledge transfer.

Ferrara, Italy

November 2025 - March 2026

Amazon Web Services

SOFTWARE ENGINEER INTERN

- Built a full-stack TypeScript router within a monorepo, mediating communication between AWS IDE web pages (via postMessage/iframe) and LSP packages (via JSON-RPC) to power core Amazon Q features.
- Designed and implemented telemetry instrumentation across the routing layer, establishing operational excellence standards for monitoring request flow and surfacing latency/error metrics.
- Authored a technical design document and led stakeholder review sessions to align cross-functional teams on architecture decisions for the routing package.
- Wrote comprehensive handover documentation and onboarding guides, enabling a smooth transition of the project to the team's future maintainers.

Amsterdam, The Netherlands

April 2025 - September 2025

Projects

Tetrix

PERSONAL PROJECT

- Designed and built a fully functional Tetris clone using Arduino Uno and a Nintendo Wii Nunchuk; the project is now part of an educational workshop, helping introduce 20+ students annually to coding concepts.
- Optimized Arduino memory utilization by leveraging advanced bit manipulation techniques and other memory manipulation strategies within a limited 2KB SRAM environment.
- Created a project presentation on Reddit which reached 1500+ Upvotes, 100,000+ Views and attracted over 50 comments, creating valuable discussions about coding.

Skills

Programming Languages

C, C++, Python, Julia, Java, JavaScript, Typescript, SQL

Technical Skills

AI Agent Tooling, Machine Learning, Algorithms and Data Structures, Relational Databases, Git, RegEx, Object-Oriented Programming, Unix/Linux System Programming, GNU/Linux Command Line Interface

Languages

Italian (Native), English (Fluent/C1), Spanish (Intermediate/B1)

Extracurricular Activities

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| 2021 | Finalist , Italian Olympiads of Informatics | Remote |
| 2022 | Participant , Reply Code Challenge - Teen Edition | Remote |
| 2024 | Participant , ItaCPC | Remote |
| 2024 | Participant , Reply Code Challenge | Remote |
| 2026 | Participant , AI Agent Olympics Hackathon | Milan, Italy |