

Emanuele Petriglia

✉ inbox@emanuelepetriglia.com

✉ e.petriglia@campus.unimib.it

🌐 emanuele-petriglia

🔄 ema-pe

🚀 ema-pe

🕒 CV updated to 2024-05-13



Employment History

- 2023 – present **Adjunct professor** for Distributed Systems course. University of Milano-Bicocca, B.S. Computer Science.
Keywords: Teaching, Software Engineering (Coding Tools and Techniques, Programming Environments), Object-oriented Programming, Network Protocols.
- 2024 – present **Laboratory Tutor**. University of Milano-Bicocca, B.S. Computer Science, Distributed Systems course.
- June – July 2016 **Student Internship**, INFN National Laboratory of Frascati (LNF), Study of the C language and UNIX system administrator, with a focus on the principal technologies, architectures and data management techniques employed in the KLOE particle accelerator.
Keywords: Processor Architectures, Servers, Operating Systems, Data (Data Storage Representation, Coding and Information Theory).

Education

- 2021 – October 2024¹ **M.Sc. Computer Science, University of Milano-Bicocca** (current grade average: 30.00).
Thesis title: *Multi-Agent Reinforcement Learning for workload distribution in FaaS edge computing systems*.
Keywords: Function as a Service, Edge Computing, Load Balancing, Reinforcement Learning, Distributed Systems.
- 2017 – 2021 **B.Sc. Computer Science, Sapienza University of Rome** (110/110 *cum laude*).
Thesis title: *Design and development of APIs in Go for a domain-specific messaging system on SeismoCloud*.
Keywords: Network Protocols, Requirements/Specifications, Programming Techniques.
- 2012 – 2017 **High School IT and telecommunications, ITIS G. Vallauri Velletri**.

Research Publications

Skills

Languages **Italian, English.**

¹provisional





Skills (continued)

Programming Languages	■	Go, C, Python, Java, PHP, Scala, C++, MIPS Assembly, Dart.
Technologies	■	Linux (Fedora, CentOS, Debian, Ubuntu), Git, GNU tools (Bash, m4, AWK, grep), mininet, CUDA, OpenCL, MPI, OpenMP.
Virtualization	■	Docker, Podman, Buildah, Kubernetes, Skaffold, LXC, VirtualBox, systemd-nspawn, Proxmox VE, QEMU.
Framework/Libraries	■	[JakartaEE (Java)], [Ray, Matplotlib, Pandas, Numpy (Python)], [Flutter (Dart)], [Glibc, GLib/GObject/GTK (C/C++)]
Automation	■	GitLab CI/CD, GitHub Actions, Make, Maven, Ant, Gradle, CMake, Systemd, Composer.
Databases	■	MariaDB, SQLite, MySQL, PostgreSQL, Redis, ArangoDB, MongoDB, SQL, Neo4J, ORM.
Protocols	■	HTTP, REST, TCP, UDP, SSH, D-Bus.
Standards	■	POSIX, OpenAPI, PGP/GPG, ANSI C, UML, JSON, YAML, CSV, INI, XML, Unicode.
Documentation	■	LaTeX, GNU Groff, AsciiDoc, Markdown, PlantUML.

Certificates





- 2021 ■ **CyberChallenge.IT** Course Attendance. Issued by CINI.
Keywords: Processor architecture, Operating systems architecture, Network and Web architecture, Security, Data Encryption, Database, C and Python language.
- 2018 ■ **Java SE 8 I iZo-8o8**. Issued by Oracle.
Keywords: Programming Techniques (Object-oriented Programming, Concurrent Programming).

Volunteering Experience

- 2015 – present  **Open Source Contributor** (Worldwide/Online). Volunteering in a variety of open source projects, contributing to all aspects of software engineering: development, design, documentation, testing, bug hunting/fixing and localisation. Contributions to projects ranging from small scale and diffusion to larger ones like:
- Xfce (desktop environment for Linux),
 - DevelopersItalia (official Italian hub for software in public administration),
 - Raylib (low-level graphics library in C),
 - Fedora (a Linux operating system).
- Keywords: Teamwork, software engineering and development, programming languages.
- 2022 – present  **PCOfficina** (Milan). A recognized association that aims to reduce the amount of computer waste generated, by the reuse and redistribution of computers to educational institutions and other nonprofit organizations. The association also aims to educate users about the responsible use of hardware and software.
- Keywords: Team work, Public relations, Cooperation, Hardware and software skills, Public speaking, Event management, Work management, Computer regeneration.
- 2019 – 2021  **SapienzaHub** (Rome). A group of students with the aim of facilitating the access to information about lectures, materials and exams of several courses during the bachelor's degree in Computer Science. Some projects consist of a website, a web archive, moderation for social groups and a bot software to support this.
- Keywords: Social moderation, Cooperation, Communication, Web Development, Bot development.
- 2022 – present  **Mater Amabilis and Saint Anne Pastoral Community** (Milan). Educator role in a team to manage and organize a teenager group in a year course.
- Keywords: Teamwork, Event preparation and planning, Social skills.

Miscellaneous Experience

Speaker in Public Talks

- May 2024  LineageOS: Regenerate your Android smartphone. PCOfficina, Milan. Keywords: mobile operating system, embedded hardware, hardware/software protection.
- December 2023  Memtest86+: What it is, how it works and how it is implemented the popular x86 RAM tester. PCOfficina, Milan. Keywords: hardware architecture, reliability and testing, software tools.
- October 2023  The state of Xfce in 2023. Linux Day Milano 2023. Keywords: open source, software engineering.
- July 2023  Open Source Licenses: An Introduction and Developer's Guide. PCOfficina, Milan. Keywords: legal aspects of computing.

Miscellaneous Experience (continued)

- October 2019  Python and Web API: A Telegram Bot Example. Linux Day Latina 2019. Keywords: programming languages, web architecture, bot development.
- October 2017  pass: a GPG and Git based password manager. Linux Day Latina 2017. Keywords: data encryption, password management.