

Mattia Callegari

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Software Engineer

I am a software engineer with hands-on experience in developing and integrating backend e-commerce platforms, primarily using Go. Most recently, I contributed to the engineering team at Emma – The Sleep Company, where I focused on building scalable and efficient solutions to enhance their online business operations. I began my academic journey in Computer Science at Politecnico di Milano in 2020, where I developed a solid foundation in software development, algorithms, and data structures. Currently, I am channeling my expertise into real-world applications, leveraging and honing my skills in dynamic, fast-paced environments.

WORK EXPERIENCE

Backend Software Engineer • Lisbon Emma – The Sleep Company • 01/2024 – 09/2024

- Engineered a querying tool in **Go**, slashing customer support time by 50% to locate marketplace orders, streamlining operations. Created internal APIs leveraged by a frontend custom component.
- Revamped and implemented a complete refactoring of a central Go **microservice**, reducing the codebase by 50% to handle multiple marketplace aggregators, optimizing efficiency.
- Organized and maintained firefighting **Postman** collection, automating tasks, saving hours on support
- Wrote, adapted and integrated a new **CI/CD** workflow, supported by GitHub Actions, to move to trunk-based development.
- Worked with marketplace's managers and stakeholders directly, planned and developed integrations for our backend. Tested and supported 20+ rollouts of sales channels
- Improved scalability and uptime by designing and managing **Kubernetes** deployments, integrating them into the CD process, resulting in a more efficient software development lifecycle.

Software Engineer • Berlin • Internship Prestatech • 10/2023 – 02/2024

- Bootstrapped a new ML approach to parsing bank documents using state-of-the-art transformers and **LLMs**. Trained and fine-tuned **LayoutLM** for classification and extraction tasks
- Deployed (with **FastAPI**) an endpoint for the classification of PDF and scanned documents in 32 different templates, leveraging the ML model trained in-house.
- Developed an open-source **Python** library for PDF parsing which improved speed by up to 9-10x.
<https://github.com/weareprestatech/hotpdf>
- Proposed and implemented a Sparse Matrix approach to reduce memory space occupation using Hash Maps. Reduced memory consumption by up to 200%.
- Organized the **CI/CD** routines using GitHub Actions and pre-commit hooks. Optimized the test suite to run parallel, achieving a speed-up of 2x.

Student Researcher • Milan • Part-time NECSTLab – NECSTCamp • 02/2023 – 09/2023

- Participated in a project involving the improvement of soft and hard skills. Completed leadership, creativity and team building courses whilst focusing on a **CUDA Parallel Computing** project on High Performance Computing (**HPC**) for Genetics. Project: github.com/callegarimattia/GPU101-SYMGS

EDUCATION

Politecnico di Milano Bachelor's in Computer Science and Engineering • ongoing • 09/2020 – Present