

Simone MAGGI

Machine Learning Engineer

in [linkedin.com/in/simone-maggi-4064b01b1](https://www.linkedin.com/in/simone-maggi-4064b01b1) github.com/simoneMaggi
☎ +39 346 1323382 @ simone.maggi.work@gmail.com
📍 Rome, Italy
📄 Available for relocation in Toulouse, France.



Currently, I am employed at HCL Software, where I am involved in the end-to-end implementation of machine learning solutions, spanning from statistical modeling to deployment in production environments.

WORKING EXPERIENCE

Today
October 2022

Machine Learning Engineer, HCL SOFTWARE, Rome, Italy

- A R&D team in a **multicultural** environment (India, Italy, US).
- Implemented and deployed in production a new solution (link) from scratch : a probabilistic ML model based on **Bayesian Stat (PyMC)** for risk assessment in the context of project management. In collaboration with a software architect and another ML/software engineer, I have personally led the probabilistic modelling, experimentation (MLFlow) and model engineering parts.
- Developed a **RAG system**, tuned and evaluated on the product documentation in collaboration with the technical writers. The system will be integrated with existing solutions (HCL UnO and HCL Clara) to enhance user experience.
- I have collaborated with the rest of the team in maintaining (bug and vulnerabilities fixing) the products, customer support, and demos.
- **Mentored** newly hired colleagues and interns making sure that they are actively involved in the projects.

Python Anomaly Detection PyMC Docker Micro-services Architecture RAG

September 2022
April 2021

Research and Developmnet Engineer, CPM S.P.A., Italy

- I have collaborated with another colleague in the development from scratch of a navigation system for Autonomous Guided Vehicle (SLAM LiDAR navigation), using cutting-edge technology in the field. The system has been prototyped and tested on AGVs in a real worksite environment .
- I have learnt a completely new subject 'AGV & SLAM Navigation' independently while delivering and testing piece of software(C++, Python, C#).
- Clear and simple presentations to deliver the results to the Stakeholders (Durr, Germany).

C++ C# WPF SLAM Navigation

June 2018
March 2018

Machine Learning intern, SAN S.R.L., Italy

- Supervised Classification of ECG signals : ETL : Filter, Normalize and Label the biometric signals, and upload the processed data in a DataBase. ML : Implemented algorithm to extract biometric indicators (Python) from data to feed a Neural Network(TensorFlow) (86% accuracy). Train directly a multilayer 1-D CNN (Keras) on the signal (95% accuracy).

Python GIT Keras Tensorflow

EDUCATION

- 2021 M. Sc. Stochastics and Data Science, University of Turin : 110/110 cum Laude, **Thesis** : Semi-Supervised Irregular heartbeat detection using Deep Generative modelling.
- 2018 Bachelor in Computer Engineering, Politecnico of Turin : 104/110

SKILLS

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|------------------------------|---|
| Statistical Machine Learning | Knowledge of Statistics (Frequentist, Bayesian, Hypothesis Testing). Supervised/Unsupervised ML models in Scikit-learn . Deep Learning Models with Pytorch (CNN, GAN, Adversarial Autoencoder) |
| Programming | Designing Object-Oriented architectures using modern C++, Python, Java . |
| Micro-Services Architectures | Docker and Docker-Compose. Worked with Nginx, Keycloak, Redis, RabbitMQ, Kafka |
| Database | Relational databases SQL, Elastic Search, MongoDB |
| OS and utility | Unix CLI, VS Code, GIT, MLFlow, Jenkins. |

LANGUAGES

Italian ●●●●●
English ●●●●○