Simone **Maggi**
Machine Learning Engineer

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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, from statistical modeling to deployment in production environments.

Work experience

October 2022 to till date — **Machine Learning Engineer, HCL Software, Rome, Italy**

- Implement and deploy in production an innovative ML solution (link), based on Bayesian Statistic **PyMC, BART and Monte Carlo simulation** for risk assessment within project management.
- Drive probabilistic modelling & experimentation (MLFLow) and model engineering, in collaboration with software architects and ML/software engineers.
- Developed a **RAG system**, tuned and evaluated on the product documentation in collaboration with the technical writers. This system will be integrated with existing solutions to enhance user experience.
- Coordination with the team (US, India and Italy based) in upgrading the product quality, customer support and demos.
- Mentor the newly hired colleagues and interns to ensure they are actively involved in the projects.

Python | PyMC | Statistical Modelling | Docker | Micro-services Architecture | RAG | MLFLow | LLM | Prompt Engineering

September 2022 April 2021 — **Research and Developmnet Engineer, CPM S.P.A., Italy**

- Development of a navigation system for Autonomous Guided Vehicle (SLAM LiDAR navigation), using cutting-edge technology. This system has been prototyped and tested on AGVs in a real worksite environment .
- Knowledge on 'AGV & SLAM Navigation' while delivering and testing the piece of software(C++, Python, C#).
- Delivery of the results to the Stakeholders (Durr, Germany) via presentations

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

April 2021 — M. Sc. Stochastics and Data Science, University of Turin : 110/110 cum Laude, **Thesis** : Semi-Supervised Irregular heartbeat detection using Deep Generative modelling.

September 2018 — Bachelor in Computer Engineering, Politecnico of Turin : 104/110

Skills

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, Keycloack, Redis, Kafka
Database	Relational databases SQL, Elastic Search, Mongodb
OS and utility	Unix CLI, VS Code, GIT, Jenkins CI/CD.

Languages

Italian ●●●●●
English ●●●●○