SIMONE MAGGI

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About me

Graduated with excellent mark in an Applied Math Master of Science, with a Bachelor degree in Computer Engineering and a working experience in AI for robotics. I am astonished by the rapid evolution of AI and I yearn for being part of this development to deliver its potential to society. Currently, I am eager to tackle new challenges in this field.

Skills

- **Programming for data science:** Development skills in **Python** (Pandas, Pytorch for Deep Learning, Scikit-learn) and **R**. Knowledge of data visualization libraries(Matplotlib, Seaborn).
- **Statistical Machine Learning:** Rigorous knowledge of Statistics (Frequentist, Bayesian, Hypothesis Testing). Understanding of the Supervised/Unsupervised ML models (Statistical Regressions, Decision Trees, SVM, Clustering, PCA). Experience in the implementation of Deep Learning Models with Pytorch and Keras (CNN, Variational Autoencoder, GAN, Adversarial Autoencoder).
- **Programming:** Working experience in designing applications with Object-Oriented architecture using modern **C++**. Knowledge of WPF UI development using C#. Knowledge of Java and C. Use of GIT.
- **Database Management:** Knowledge of **SQL**, relational algebra and PHP for database interactions.
- **System**: Good knowledge of Unix kernel-based operative systems.

Experience

Research and Development Specialist   Nov 2021 - Present

CPM S.P.A - DURR   Turin, Italy

- **AI for Robotics:** Developed a system for navigation of Autonomous Guided Vehicle (SLAM LiDAR navigation), using cutting-edge technology in the field.
- **Self-Aware**: Drive the project from beginning to end with immediate high responsibility of final decision-making.
- **Team Working**: Part of a small(<5) and dynamic team where effective communication is the key.
- **Communication**: Clear and simple presentations to deliver the results to the Stakeholders (Durr, Germany).

Research and Development Intern   Jun 2021 – Nov 2021

CPM S.P.A. - DURR   Turin, Italy

- **AGILE**: Master a new subject 'AGV & SLAM Navigation' independently while delivering and testing piece of software(C++, Python, C#).

Machine Learning Intern   Mar 2018 - June 2018

SAN s.r.l   Turin, 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).

Education

M. Sc. Stochastics and Data Science, University of Turin : 110/110 cum laude   Sep 2018 - Apr 2021

Core topics: Statistical Machine Learning, Time Series analisys, Statistical Inference, Bayesian statistics, Probability.

Thesis: Semi-Supervised Irregular heartbeats detection using Deep Generative modelling.

Implemented a novel model derived from an Adversarial AutoEncoder (in Pytorch CUDA), capable of detecting irregularities in ECG signals by modelling its normal behaviour(**0.95 ROC-AUC** on MIT-BIH data **comparable with State-of-Art**).

Bachelor in Computer Engineering, Politecnico of Turin: 104/110   Sep 2015 - Oct 2018

Language

English – Proficient User   **Italian** – Native User   **French** – Beginner