

MATTEO MERLO

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KEY STRENGTHS

I am a dynamic, motivated and flexible person. Eager to learn, I love facing new challenges and getting involved in new experiences. I am also optimistic and proactive in dealing with problems, but also pragmatic and realistic in analyzing facts. I'm a tech enthusiast. I approached computer science, then I pursued my passion for automation and artificial intelligence, aspiring to be a ML/DL Engineer. I love working in a dynamic and multicultural environment.

Research interest: • Machine Learning & Deep Learning • Artificial Intelligence • Computer Vision • Data Science

WORK EXPERIENCE

- **Software engineer junior consultant** Apr. 2017 - Dec. 2017
Consoft Sistemi S.P.A
- *Technologies used:* C, C++, Python, JSON, Arduino, LoRaWAN
o Implemented ad-hoc mobility library on specific designed smartwatch for elderly person.
o Tested LoRaWAN communication protocol as solution within an IOT environment.
o Developed a JSON-like package data format.

EDUCATION

- **MSc Degree in Data Science and Engineering**, Politecnico di Torino Sept. 2020 - Exp. Dec. 2022
Main Courses: Data Science, Mathematics in ML, Computer Vision, ML for IoT. Current GPA: 26/30
- **BSc Degree in Computer Engineering**, Politecnico di Torino Sept. 2014 - Jun. 2020
Graduated with 95/110

CURRICULAR PROJECTS

- **Twitter-Sentiment-Analysis:** [Repository, Paper]
- *Technologies used:* Python, Scikit-Learn, Numpy, Pandas, Grid Search, various classification algorithm.
o Sentiment analysis of a dataset of tweets through machine learning techniques.
o Final project of Data Science course, score achieved 12/12, final accuracy above 95 percentiles of classroom.
- **Real-time Domain Adaptation in Semantic Segmentation:** [Repository, Paper]
- *Technologies used:* Python, PyTorch, Torchvision, Numpy, TensorBoard.
o Computer vision project in **semantic segmentation** of images from a virtual environment and subsequent **domain adaptation** in real world for an application in real-time for **self-driving cars**.
o Final project of Machine Learning and Deep Learning course, final score 30/30.
- **Default of Credit Card Clients Dataset Analysis:** [Repository in progress, Paper in progress]
- *Technologies used:* Python, Scikit-Learn, Pandas, Grid Search, SMOTE, PCA, AdaBoost, Random Forest.
o Data analysis through advanced ML techniques such as SMOTE, PCA using SVM and Random Forest

EXTRACURRICULAR EXPERIENCE

- **IT division member** Oct. 2016 - Jul. 2020
Icarus Polito students team [Project]
Icarus is a students team working on UAV airplane design and rocket.
- *Technologies used:* C, C++, C#, Java, Arduino, STM32 Nucleo, Matlab, GRIB2, Weather API
o Designed and built a UAV and rocket ground control station.
o Designed from scratch a flight route path planner through clouds using graph algorithms.
o Designed a real-time control status GUI with MatLab App Designer.

SKILLS SUMMARY AND CERTIFICATES

- **Human Languages:** Italian(Native), English(Advanced), German(Limited proficiency), French(Beginner)
- **Programming Languages:** Python, C, C++, C#, Java, SQL/NoSQL, R, Bash
- **Machine Learning:** Statistics, Pytorch, Tensorflow, Keras, Numpy, Pandas, Scikit-learn, Pyspark, MapReduce
- **Platforms:** Linux, Windows, Arduino, Raspberry, Colab, Google cloud
- **Soft Skills:** Team building, Proactivity, Flexibility, Patience, Open-mindedness, Critical thinking, Problem-solving
- **Certificates:** IELTS overall band 6.0 Mar. 2016

INTEREST, HOBBIES AND VOLUNTEERING

Hobbies: Hiking, Swimming, Chess, Boardgames

Interest: Space, Motor sports, Travelling, Reading scientific papers

Volunteering: Musician at the Balangero's and Coassolo Torinese's band since 2006

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