

MATTEO MERLO

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KEY STRENGTH

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 and aspiring to be a ML/DL Engineer.

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

Turin, Italy

- *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, Logistic Regression, SVC.
- 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, SMOTE, PCA, SVM, Random Forest, Logistic Regression.
- o Data analysis through advanced ML techniques such as SMOTE, PCA using SVM and Random Forest

• Smart Home Vigilance System:

[Repository in progress, Paper in progress]

- *Technologies used:* Python, Raspberry Pi, MQTT, Tensorflow, Speech Recognition, OpenCV
- o An indoor video surveillance system capable of recognizing the presence of a human intrusion.
- o Final project course Machine Learning for IOT.

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