



Manuele Macchia

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Born in Foggia, Italy on 25/05/1996

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Profile

I am a second-year MSc student in data science and engineering with a computer science background. Interested in big data analytics, data engineering, natural language processing, computer vision and explainable AI. Capable of working in a team to solve challenging problems and open to multicultural environments. Detail-oriented, analytical mindset and creative spirit.

Skills

Programming Python, R, MATLAB, Java, Git
Database SQL, Oracle, MongoDB
Data analysis & machine learning scikit-learn, pandas, NumPy, NetworkX, PySpark, H2O, Hadoop
Deep learning TensorFlow, PyTorch
Data visualization Matplotlib, Tableau
Web HTML5, CSS, JavaScript, Hugo

Languages

Italian (mother tongue)
English (fluent, FCE Grade A, CEFR C1, June 2013)
Spanish (basic)

Associations

MALTO

November 2020 – Present

Founding member

- Student team with the goal to take part in international data science competitions, achieving high performance on machine learning problems and proposing cutting-edge approaches.
- Set up an internal wiki for sharing knowledge among team members.

Interests

Guitar, Digital graphics.

Education

Politecnico di Torino

October 2019 – Present · Turin, Italy

Master of Science in Data Science and Engineering

Current average grade: 28.8/30.

Courses: Machine learning and Deep learning, Distributed architectures for big data processing and analytics, Statistical Methods in Data Science, Data Ethics and Protection.

Politecnico di Bari

September 2015 – October 2019 · Bari, Italy

Bachelor of Science in Computer Science and Automation Engineering

Information systems and applications track. Final grade: 107/110.

Universidad de Las Palmas de Gran Canaria

January – June 2018 · Las Palmas, Spain

Erasmus+ programme, Degree in Computer Engineering

Liceo Scientifico A. Volta

September 2010 – July 2015 · Foggia, Italy

High School Diploma in Scientific Studies

Main subjects: Mathematics, Physics, Philosophy. Final grade: 80/100.

Experience

AIKO: Autonomous Space Missions

March – May 2021 · Turin, Italy

Deep Learning Intern

- Replicated state-of-the-art performance of Temporal Fusion Transformer for multi-horizon time series forecasting.
- Set up a pipeline to evaluate and visually explain model predictions.
- Reduced baseline model weight by 90% while retaining a comparable normalized quantile loss on hold-out set.
- Adapted model to forecast proprietary satellite sensor measurements, achieving 0.027 p50 risk on test data.

Projects

Incremental learning in image classification

[Paper](#) · [Code](#)

May – July 2020

- Implemented incremental learning baselines from scratch in PyTorch.
- Designed and implemented experiments to study the effect of variations to state-of-the-art approaches, obtaining +1.2% average incremental accuracy with respect to the baseline.
- Identified and developed novel approaches to overcome limitations of baselines.

Sentiment analysis of hotel reviews

[Article](#) · [Code](#)

December 2019 – February 2020

- Analyzed, cleaned and processed a natural language dataset of hotel reviews in Italian scraped from TripAdvisor.
- Developed a machine learning pipeline to predict the sentiment contained in unseen reviews with high accuracy (96.4% F1-score).