# Paolo Mandica

## PhD Student

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#### Education

### PhD in Computer Science

Jan. 2022 – Present

Sapienza University of Rome - Panasonic R&D

Rome, Italy

Conducting research on deep learning for computer vision, focusing on self-supervised learning, active learning, hyperbolic geometry, and action recognition.

#### MSc. in Data Science - 110/110 cum laude

Sept. 2019 - October 2021

Sapienza University of Rome

Rome, Italy

Curriculum specialized on: artificial intelligence, machine learning, deep learning, computer vision, data mining, information retrieval systems. For my master's thesis I conducted research on Self-supervised Representation Learning via Contrastive Walks in Videos.

## B. Eng. in Computer Science and Engineering

Nov. 2016 - July 2019

Roma Tre University

Rome, Italy

Curriculum specialized on Information Systems, with focus on algorithms and software development.

## Experience

#### Fundamentals of Data Science Teaching Assistant

Sept. 2022 – Feb. 2023

MSc in Data Science, Sapienza University of Rome

Rome, Italy

- Served as teaching assistant and participated in the revision of lectures, the preparation of midterm projects and the preparation of final examinations.
- The course is an introduction to the basics of Data Science as well as the relating topics from Data Mining, Machine Learning and Image Analysis, using the Python programming language.

#### **Data Mining Teaching Assistant**

Sept. 2020 - Feb. 2021

MSc in Data Science, Sapienza University of Rome

Rome, Italy

- Served as teaching assistant and participated in preparing and evaluating midterm projects, holding office hours for students, helping students at learning how to use new tools (git, libraries, etc.).
- The course focused on developing basic algorithmic techniques for data analysis and mining, with emphasis on massive data sets such as large network data.

#### Cloud Engineering Intern

March – June 2019

Xpeppers/Claranet IT

Ciampino (RM), Italy

• Developed a Serverless Application for Monitoring Event-Driven Architectures on AWS which allows clients to monitor their AWS architectures through an intuitive web application and sends alerts in case of errors in the data pipeline or in case of excessive load of the resources. The application developed was the subject of my bachelor's degree final thesis.

#### **Publications**

### Hyperbolic Self-paced Learning for Self-supervised Skeleton-based Action Representations

Luca Franco, Paolo Mandica, Bharti Munjal, Fabio Galasso

ICLR '23

- Research paper developed as a PhD student at Sapienza University of Rome, in collaboration with the AI Laboratory of Panasonic R&D Company of America.
- Topics: deep learning, self-supervised learning, hyperbolic geometry, action recognition.

#### Personal and Technical Skills

Languages: Italian (Native), English (IELTS 7.5, CEFR C1).

Programming Languages: Python, R, SQL, NoSQL (DynamoDB, MongoDB, Cassandra), Java.

Techniques: Data Analysis, Machine Learning, Deep Learning, Data Mining.

Tools: Pytorch, Tensorflow, Scikit-learn, pandas, NumPy, Matplotlib, NetworkX, Spark, Git, Docker, AWS, Unix.

I authorize the processing of personal data contained in my resume based on art. 13 of L.D. 196/2003 and art. 13 GDPR 679/16.