Enrico Meloni

Lead AI Engineer

Contact
Str. dei Cappuccini, 106
Siena
Italia

+39 349 702 3217
enrico.meloni@outlook.it
https://enricomeloni.github.io

Languages
Italian: *Native Speaker*
English: *Prof. Fluency*

Technical Skills
Python, Pandas,
Jupyter Notebooks,
Java, C++, C#,
Javascript, PyTorch,
Docker, Git

Soft Skills
Problem Solving,
Team building,
Fast Learner,
Curiosity, Objective-Driven

Passions
Software Engineering,
Data Analysis,
Computer Vision,
Distributed Systems,
Parallel Computation

Hobbies
Gaming,
Debating,
Puzzles,
Martial Arts,
Comics, Craft Beer

Work Experience

2023-curr.	**Baker Hughes**	Florence, Italy

Lead AI Engineer
- Software Architecture design and implementation
- Team lead and mentorship
- MLOPS and DevOps design and implementation

2021-2022	**Internship at BrainControl, LiquidWeb S.r.l.**	Siena, Italy

ML Researcher
- Study of current State-of-the-art for Brain Control Interfaces.
- Design of Graph Neural Network architecture.
- Data management and pre-processing.
- Benchmarking and evaluation of solutions.
- Technologies: Python, PyTorch, Scikit, Jupiter Notebooks.

2018-Curr.	**WANRaptor WAN Emulator at East Coast Datacom, Inc**	Rockledge, USA

Freelance Project Manager and Full-Stack Developer
- Development of embedded WAN Emulator for network impairments.
- Currently used for testing network solutions in top-tier companies.
- Management of development team.
- Design and planning of the project.
- Technologies: Java, Groovy, Grails, Python, Docker, Ansible, Make.

2016	**Internship at Inera S.r.l.**	Pisa

Backend Developer
- Development of web interface to web-scraping software.
- Integration of the interface to data analytics tools.
- Technologies: Java, Groovy, Grails, Elasticsearch.

Education

2019-2023	**PhD in Smart Computing** Machine Learning and Explainable AI University of Florence	Siena, Italy
2021	**4th International School on Deep Learning** IRDTA, University of Marche	Las Palmas de Gran Canaria, Spain
2016 - 2019	**M.Sc. in Computer Engineering** Full Marks and Honor University of Pisa	Pisa, Italy
2017	**The Cornell, Maryland, Max Planck Pre-doctoral Research School** Max Planck Institute	Saarbrücken, Germany
2013 - 2016	**B.Sc. in Computer Engineering** Full Marks and Honor University of Pisa	Pisa, Italy

Personal Projects

See (**https://github.com/enricomeloni**) and (**https://github.com/MeloniZippoProjects**) for other projects.

2018 - 2019	**Meme Audiobot for Telegram**	Pisa, Italy

- A Telegram inline bot that can be used to search and share popular quotes or sounds in a Telegram message without leaving the chat context.
- Focus on cloud technologies and CI/CD tools.
- Techonologies: C#, Asp.Net Core, Powershell, Azure CI/CD, Telegram Bot API

2017	**Control Tower Simulation**	Pisa, Italy

- Study of an Airport System through analytical means (Queueing Theory). The data was collected through extensive use of simulation, pre-processed through Gawk, and analyzed and plotted through Matlab. Components were instrumented with Powershell to achieve high degree of automation.
- Focus: Software Engineering, Data Collection and Management, Data Analysis, Data Visualization.
- Technologies: C++, Omnetpp, Matlab, Powershell

2018	**Audio Recognition on Android**	Pisa, Italy

- An Android App leveraging Audio Fingerprinting to recognize music. The user can record some music with the microphone and the application will respond with the title and artist of the most similar music found in the database.
- Focus: Media Processing, Time Series Fingerprinting and Distance-based Indexing.
- Technologies: Java, Powershell, Android

2018	**Face Recognition on Android**	Pisa, Italy

- An Android App leveraging Machine Learning technologies to recognize faces. The user can register new faces through images or videos, and flag that face as authorized or not authorized. The smartphone cam is used as live feed for face detection, and the app will notify if face detected are allowed or not.
- Focus: DNNs, Machine Learning and Transfer Learning
- Technologies: Java, Android, OpenCV

2017	**KP-ABE Photo Sharing**	Pisa, Italy

- Service for secure image sharing. It leverages KP-ABE cryptography for encryption. It is composed of a client and a server. The client allows the user to upload and download images according to their permissions. The server creates and distributes keys in a transparent and secure way over HTTPS.
- Focus: software engineering, cryptography, security, and privacy.
- Technologies: C#, .NET, XAML, WPF.

Publications

2023	**PARTIME: Scalable and Parallel Processing Over Time with Deep Neural Networks** *21st IEEE International Conference on Machine Learning and Applications*	First Author
2022	**Stochastic Coherence Over Attention Trajectory For Continuous Learning In Video Streams** *31st International Joint Conference on Artificial Intelligence*	Co-Author
2021	**Messing Up 3D Virtual Environments: Transferable Adversarial 3D Objects** *20th IEEE International Conference on Machine Learning and Applications*	First Author
2021	**Evaluating Continual Learning Algorithms by Generating 3D Virtual Environments** *30th International Joint Conference on Artificial Intelligence*	First Author
2020	**SAILenv: Learning in Virtual Visual Environments Made Simple** *25th International Conference on Pattern Recognition*	First Author
2020	**Learning accurate personal protective equipment detection from virtual worlds** *Multimedia Tools And Application, Springer, 2020*	Co-Author
2019	**Learning Safety Equipment Detection using Virtual Worlds** *International Conference on Content-Based Multimedia Indexing 2019*	Co-Author