

Filippo Mameli

Machine Learning Engineer

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Professional Summary

Dedicated **Machine Learning Engineer** with a strong academic foundation in data science and a demonstrated passion for computer vision. Equipped with a master's degree and a thesis focused on cutting-edge **computer vision** techniques, I bring a deep understanding of data analysis, machine learning, and data engineering to the table.

I am driven by a relentless pursuit of innovation and excellence in **data-driven solutions**, and I thrive in collaborative environments where creativity and problem-solving skills are paramount. My commitment to leveraging data as a strategic asset is unwavering, making me a valuable asset for organizations seeking to harness the power of **Big Data** to drive informed decisions and achieve remarkable results.

Work experience

Machine Learning Engineer 05/2022 - On Going

Data Reply

- Led the development of proactive algorithms tailored to enhance fleet management, utilizing Databricks and AWS Glue as the core technology stack. These innovations significantly improved fleet performance, reduced maintenance costs, and enhanced overall operational efficiency, contributing significantly to project success.
- Managed a team of three professionals responsible for API development for a platform project, ensuring seamless collaboration and timely delivery.
- Maintained a state-of-the-art data hub platform, actively contributing to the advancement of data-driven solutions and strategies

Data Engineer 06/2021 - 05/2022

Dbiz S.R.L

- Proficient in data ingestion, encompassing data extraction, manipulation, and scheduling, to facilitate Power BI report generation.
- Skilled in designing and developing serverless Mobile/Web applications utilizing AWS Amplify, ensuring efficient and scalable solutions.
- Experienced in building web applications using Django and React, combining the power of these technologies to create dynamic and user-friendly web interfaces.

Data Engineer 07/2020 - 06/2021

NTT Data

- Proficient in designing, developing, and deploying big data products within a microservices architecture.
- Skilled in Scala/Java and Python development to create robust and scalable solutions.
- Experienced in orchestrating deployments using Openshift and Kubernetes for efficient containerization.
- Proficient in managing DevOps pipelines with Jenkins to streamline the deployment processes.

University tutor 10/2017 - 10/2019

University of Florence

The primary role centered on providing assistance and support to incoming freshmen students within the Computer Science faculty at the University of Florence.

Projects

JPEG Artefact Removal using GAN-based Neural Network

[Github link](#)

[Publication](#)

Pioneered the development of a neural network designed to effectively eliminate artefacts resulting from the widely used JPEG compression format in digital images. The Generator, based on the U-net architecture, served as the cornerstone of the model. To ensure model stability and optimize results, the novel NoGAN training technique was adopted, revolutionizing the neural network's training process.

Tools: *Python, Pytorch, FastAI, Jupyter*

Proactive Fleet Management Algorithms with Databricks and AWS Glue

Led the development of proactive algorithms tailored for optimizing the management of a fleet of vehicles, employing Databricks and AWS Glue as the core technology stack. These innovations substantially improved fleet performance, reduced maintenance costs, and enhanced overall operational efficiency, contributing significantly to project success.

Tools: *Scala, Databricks, Aws Glue*

Retail Price Forecasting Ingestion Service with Kafka

Developed a robust data ingestion service using Kafka to facilitate real-time data flow for price forecasting in the retail sector. This project involved designing and implementing a scalable and fault-tolerant data pipeline, enabling the seamless integration of diverse data sources. The ingestion service played a pivotal role in delivering timely insights for pricing strategies, empowering the retail team to make data-driven decisions and gain a competitive edge in the market.

Tools: *Java, Akka stream, Kafka*

Education

Master's degree in Computer Science (Data science)

Thesis: **Deep Learning Techniques to Image Compression Artefact Removal** ([Github](#) , [Publication](#))

Grade: 110/110

Skills

Programming languages

- Python
- Java/Scala
- Javascript/Typescript

AI/Machine Learning

- Pytorch
- FastAI
- MLFlow
- Keras
- Scikit-learn
- Numpy
- Matplotlib
- Huggingface

Big Data and Databases

- Databricks
- Spark
- DBT
- Kafka
- Hadoop
- SQL
- MongoDB/DynamoDB
- Akka
- Pandas

Web

- Next.js
- React, React-Native
- GraphQL/REST
- Amplify

Tools

- Git
- Bash, Zsh
- Terraform
- Visual Studio Code
- Docker, Docker-Compose
- Kubernetes
- IntelliJ, PyCharm
- Jupyter Notebook
- OS: Ubuntu, MacOS, Windows

Cloud

- AWS, Azure, GCP
- Vercel

Languages

- Italian (native)
- English

Certifications

- First Certificate - Level B2
- Associate Cloud Engineer - Google Cloud

Currently studying

- [Quantitative Economics with Julia](#)
- [Designing Data-Intensive Applications](#)

Social

[Filippo Mameli](#) | [LinkedIn](#)

Hobbies

- Photography
- Music
- Cinema
- Tech
- Games