

# FEDERICO FIORIO



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[Personal website](#)



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## About me

As a dedicated computer science major, I focus on **data engineering**, **data science**, **machine learning**, and **big data**. My curiosity drives me to stay updated on tech advancements and learn new programming languages. In my free time, I work on personal projects, play board games and engage in sports, balancing life while honing my skills.

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## Work Experience

Data Reply | Milan, Italy

05/2024 – Current

### Data & Machine Learning Engineer

Consultancy based on AI, Big data and quantum.

- **Migration of DAGs:** Migrated DAGs from an old cloud composer with an obsolete **airflow** version to a new one, refactoring code and adapting it to **2.x** airflow version, assuring the backbone of a big manufacturing company stays active during the migration. The scheduler of the new GCP composer increased DAGs completion speed by 10x thanks to dynamic allocation of resources
- **Google cloud Suit:** Engaged in data ingestion and transformation using various GCP elements, mainly **Bigquery**, **Composer**, **GCS**
- **Azure and OpenAI for RAGs:** During the DAGs migration, I also assisted a team developing a RAG chatbot for a leading Italian bank. My focus was on the ingestion process, specifically chunking documents correctly and embedding them with an OpenAI model for efficient retrieval.

Management Solutions | Milan, Italy

10/2023 – 04/2024

### Data Engineer

International consultant company, working mainly for financial institutions and banks.

- **Development in IBM DataStage (ETL) and SQL** to support the **Datawarehouse** area of a financial institution: Requirements analysis and definition, development, and testing. Support in updating the **PILLAR III metrics** of a financial institution.
- **Proficient in SQL**, leveraging its power to craft intricate queries, enhance database performance, and extract valuable insights
- Collaborated closely with cross-functional teams to establish and enforce **data governance** policies

## Internship R&D

IT-centered company that develops personalized solutions for clients with focus on AR, VR and web applications.

- Conducted extensive research on deep fakes and Generative Adversarial Networks (GANs) architecture
- Maintained a strong focus on ethical considerations and responsible use of GANs technology

## Skills

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**Machine learning fields:** NLP, Membership inference attacks to text-to-image models, generative AI (deepfakes)

**Machine learning frameworks:** Scikit-learn, Pytorch, Tensorflow

**Programming Languages:** Python, Java, Golang, C, C#, Javascript

**DBMS – ETL:** SQL Server, IBM InfoSphere DataStage

**Versioning control:** Git

**Google Cloud Platform:** Bigquery, Composer, Cloud functions, GCS, Azure AI search

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## Education

10/2021 - 10/2023

**Master Degree in Computer Science | Università degli studi di Milano, Milan**

- Thesis on Membership inference attacks on text-to-image models
- Advanced machine learning theory and algorithms

09/2022 - 02/2023

**Erasmus + | University of Copenhagen, Copenhagen**

- Computer vision traditional algorithms and CNNs
- LLM theory and practice

10/2018 - 10/2021

**Bachelor Degree in Computer Science | Università degli studi di Milano, Milan**

- Thesis on generation of deepfakes through analysis and study of various python libraries
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## Certifications

- Google cloud professional Machine Learning engineer
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## Personal projects

- Published an infinite runner game called "Spaceship Mayhem" on the Play Store in 2020 (The game was later removed due to not updating Google's privacy terms).

Find more on Github ([Federico Fiorio | GitHub](#)) or at my [Personal website](#)

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## Communication

**Italian** - Mother tongue

**English** - C1