**Daniele D’Avino**

Machine Learning Engineer: Cloud AI Specialist

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**Summary**

Machine Learning Engineer with experience in transforming raw data into meaningful insights through the use of AI (Data-centric AI, ML Modeling, AI applications, MLOps, Generative AI) and statistics for better decision-making. Proven expertise in mathematical modeling, machine learning, and statistical techniques. Skilled in delivering technical leadership and managing teams of data scientists and analysts.

**Skills**

**Math and Statistics**: operative research (optimization), Bayesian statistics, simulation techniques, graph theory.

**Dev and Programming**: Python (Scikit-learn, PyTorch, Networkx, Streamlit, OpenCV), Docker, Git, SQL, Google Cloud (Cloud Run, Vertex AI, Big Query), JupyterLab, API, Generative AI (LLM), Linux environment.

**Data analysis and Machine learning**: Factor analysis, Dimensionality reduction, Network analysis, Regression, Classification, Clustering, Statistical programming, WebApp/POC prototyping, Embedding Techniques, NLP.

**Work Experience**

**Machine Learning Engineer** 02/2022 – Present

**Sky Group,** Milano

*Work within the anti-piracy and cybersecurity team to develop network monitoring tools. I’m involved in the following tasks:*

* Machine Learning development:
  + Optimizing algorithms for object detection tool, achieving a 10% improvement in accuracy.
  + Developing Generative AI tools for language and computer vision tasks, reducing execution time by 50%.
  + Developing and cloud-deploying Machine Learning models for monitoring IP activities over broadcast networks.
  + Developed an optimization engine (ILP) to minimize the cost of API requests: saving expenses for about 30%.
* Cloud Engineering and deployment:
  + Participating in the cloud migration strategy, transitioning from local VMs to a microservices architecture inside GCP, resulting in a 30% reduction in execution time and enhanced logging.
  + Conducting code reviews and debugging, ensuring robust and efficient team output.

**Data Scientist** 06/2018 – 02/2022

**Wealthype,** Milano

*Developed and maintained machine learning applications for both supervised and unsupervised analysis on mixed structured data. Led data enrichment, simulation, and optimization activities using a Bayesian programming framework.*

* ML applications for wealth management sector that result in an average 5% increase in customer profitability.
* [International PATENT](https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2023089554&_cid=P11-LX59YG-74561-1) about customized financial portfolio construction method.

**Quantitative Analyst** 02/2016 – 06/2018

**AdviseOnly,** Milano

*Worked on the digital asset management platform where my main focus was on developing and managing investment strategies for different financial goals pursued by end customers.*

**Main Personal Projects**

[Decision Intelligence Application](https://github.com/davins90/unsupervised_anomaly_detection): web application developed for addressing fraud detection and clustering customers. Frontend and backend deployed on GCP with API management.

[Meteo Adverse Classifier](https://github.com/davins90/meteo_adverse_classifier)**:** classification algorithm for predicting climate adverse future condition with Open Data.

[Network Analysis Pipeline](https://sub-cab-network.herokuapp.com/) **:** Analysis of submarine telecommunication network via graph theory.

**Main Education & Certifications**

[Machine Learning Engineering Curriculum](https://fourthbrain.ai/courses/machine-learning-engineer/) at FourthBrain.ai

[Google Cybersecurity Certificate](https://www.credly.com/badges/a78db000-7a61-425e-a27a-a93e2425e488/linked_in_profile) at Google-Coursera

[Deep Learning Specialization](https://coursera.org/share/f4ffbe4aa1e99fa4ac8527d37cfe5332) at DeepLearning.AI

Master degree in Quantitative Finance at Università degli studi di Milano – Bicocca