**Daniele D’Avino**

Data Scientist for decision making

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**Summary**

Senior data scientist with experience transforming raw data into meaningful insights using AI (Data-centric, 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. Additionally, adept at bridging the gap between technical and business teams by collaborating with stakeholders to develop effective, data-driven solutions that drive tangible business results.

**Skills**

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

**Dev and Programming**: Python (Scikit-learn, PyTorch, Networkx, Plotly), Docker, Git, SQL, Google Cloud Platform (Cloud Run, Vertex AI, Big Query), REST API, LLM, Linux environment, Kubeflow Pipeline, Terraform, WebApp prototyping.

**Data analysis and Machine learning**: Factor and Network analysis, Dimensionality reduction, Regression, Classification, Clustering, Statistical programming, Embedding Techniques, NLP, Anomaly Detection.

**Work Experience**

**Senior Data Scientist** 02/2022 – Present

**Sky Group,** Milano

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

* Machine Learning development:
  + Optimizing algorithms for an 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 deploying a Machine Learning suite for detecting illicit behavior by IPs and Users over broadcast networks, achieving a 60% improvement in detection accuracy.
  + Developing an optimization engine (ILP) to minimize the cost of API requests, saving expenses by about 30%.
* Cloud Engineering:
  + Participating in the cloud migration strategy, transitioning from local VMs to a microservices architecture inside GCP, resulting in a 40% 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 conditions 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