Machine Learning Engineer

Frédéric Navez

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Montreal, QC

Engineer with 1 year of experience in **statistics**, I have transitioned to a role as a **machine learning engineer**. I apply a scientific rigor to **data modeling** and utilize **MLOps** practices to **deploy** and **maintain machine learning models** in **production**, all while maintaining a product-oriented perspective.

My objective is to join a **dynamic team** where we can collectively **grow and deliver innovative solutions**. As an individual, I aim to contribute to the **overall success of the company** through my passion and strong work ethic. I enjoy tackling challenges and making informed **business decisions**.

Technical skills

Languages Python, Bash, Scala.

Programming Unit testing, Integration testing, BDD, Technical documentation.Data science NumPy, Pandas, Matplotlib, Seaborn, Scikit-learn, TensorFlow, Keras.

Data engineering SQL, Data base, Web scraping, PySpark, AWS.

Integration and deployment Git, GitHub Actions, FastAPI, Flask, API security, CI/CD, Jenkins.

DataOps Docker, Kubernetes, Airflow, Amazon SageMaker.

ModelOps MLflow, Acculturation and data governance.

Monitoring Grafana, Prometheus.

Project management Agile methods, Business Intelligence, Streamlit, Power BI.

Communication French (native), English.

Projects

Music recommendation system

(Certificate in MLOps) 2023 - 2024, 5 months

DataScientest School certified by Mines Paris, PSL (Engineering Top University) — Paris, France

DataScientest specializes in training in data science and artificial intelligence. It collaborates with over 70 companies, including 30 from the CAC 40. It records a revenue of around 2,5 million euros.

- Scope This MLOps project aims to develop a sentiment-driven music recommendation application. The analysis is based on a dataset of 1,000,000 playlists obtained from the Spotify API, implementing automated deployment pipelines.
- Technologies Python, FastAPI, Docker, GitHub Actions, Airflow, CI/CD, Unit testing, BDD, AWS.

Classification of blood cells

(Certificate in data scientist) 2023, 3 months

DataScientest School certified by Mines Paris, PSL (Engineering Top University) — Paris, France

Scope — This data science project focuses on the classification of blood cells. It involves analyzing a dataset
of 17,092 images sourced from a scientific article on <u>ScienceDirect</u>, aiming to identify blood cells using computer vision algorithms.

- Technologies Python, NumPy, Pandas, Matplotlib, Scikit-learn, TensorFlow, Keras, TensorBoard, Streamlit.
- **Results** The project led to the creation of various **artificial neural network models** (CNN), including one CNN with a demonstrated **accuracy of 95%**, showcased in a **Streamlit**. However, it is important to note that this model has not been generalized to external data.

Work experience

The national institute of health and medical research — Biomedical research centres — France 2021 - 2022, 1 year

The institute is dedicated to biological and medical research, covering the entire process from laboratory research to patient bedside, and recording a revenue of 49,5 million euros.

BIOINFORMATICIAN BIOSTATISTICIAN

(Research internship in Montpellier, France) **2022**, 6 months (Research internship in Lille, France) **2021**, 6 months

Key responsibilities and achievements

- Managed and planned a budget for various biology experiments totaling approximately 30,000 euros.
- Collected and analyzed data from 11 cancer patient samples and millions of animal cells, utilizing statistical methods, for a clinical and fundamental research study.
- Communicated conclusive scientific results following laboratory experiments over a 6 months period, to a scientific audience.
- **Conducted** scientific experiments to support a doctoral student in completing her thesis research and **supervised** 5 students during their internship activities.
- Collaborated with a multidisciplinary team of approximately 10 doctors, researchers, engineers, and technicians to contribute to the advancement of medical research.

Education

Professional master's degree in machine learning engineering

2023 - 2024, 11 months

DataScientest School certified by Mines Paris, PSL (Engineering Top University) — Paris, France

• Certificate in data product manager

2024, 3 months

• Certificate in MLOps

2023 - 2024, 5 months

· Certificate in data scientist

2023, 3 months

Classes included — Computer science, Data science, Data engineering, MLOps, Cloud computing, Software engineering, Project management.

Master's degree with thesis in bioinformatics (1 year)

(Graduate programme) 2019 - 2022, 3 years

Faculty of Medicine — Lille, France

Classes included — Advanced statistics, Big data, Artificial intelligence, Applied mathematics, Mathematics modeling, Bioinformatics.