Martin Natale
ML Student

Contact

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Links

Linkedin

Github

Technical Skills

- Natural Language Processing
- Computer Vision
- Machine Learning Algorithms
- Distributed Computing
- Software Development

Tools

- LangChain
- Scikit-Learn
- Pytorch
- Tensorflow
- Hugging Face
- Numpy
- Qdrant

Languages

- Python
- Scala
- C
- SQL
- C++
- Nextjs

Spoken language

- French (Native)
- English (Fluent)
- German (Basic)
- Arabic (Beginner)

Seeking a **6-month end-of-study internship starting in February** to contribute to ML and Data Engineering projects.

Education

EPITA — *Sept. 2020 - Jan. 2025*
MS in ML and Computer Science (GPA 3.52/4.0)
Course: Theoretical fundamentals in Machine Learning - Recommendation systems - Natural language processing - Cloud solutions (Azure, Google Cloud) - Probability and advanced statistics - Distributed algorithms

Ajman University — *Jan. 2022 - May. 2022*
Exchange Semester
Exchange semester for a master's degree in computer science in Dubai

Experience

THALES — *June 2024 - Dec. 2024*
End-of-study project
- Development of a large language model (LLM) for multimodal generation from logical predicates with 5 others students.

Thinker — *Jan. 2024 - Present*
Co-founder
- Designed and developed a standalone program capable of generating more than 100,000 quizzes from Wikipedia pages, integrating GPT-4o via LangChain to optimize the quality and relevance of the questions.
- Integration of a Postgres and Qdrant database to store quizzes and associated embeddings, facilitating searches and recommendations.
- Implementation of a custom recommendation system based on a two-towers architecture, using item/user embeddings for accurate recommendations.
- Co-design of the system architecture, integrating Kafka Streams, Docker, Kubernetes and Redis to ensure scalability and performance.

DNCA Investments — *Aug. 2023 - Jan. 2024*
Internship
- Development of a Python application for the generation of risk reports, allowing daily data processing with resilience to unexpected scenarios, reducing processing time by 30%. Use of the Riskmetrics API and integration of the xlwings library for Excel report generation.
- Design of a Flask-based API for Value at Risk (VaR) backtesting, using SQL Alchemy for efficient interactions with a database of more than 500,000 rows.
- Created a centralized dashboard using Django's ORM to engage with the new API. Use of the dashboard by the majority of the team.
- Implement CI/CD pipelines with Azure DevOps and YAML, automating deployments and reducing time to production.

AJMAN University — *Feb. 2022 - May 2022*
Master of ceremonies
- Global Days: Presentation and animation of the largest university event of the year in front of more than 5000 students.
- UNESCO Art Camp Andorra: Animation of an event organized by UNESCO for the preservation of works of art.

Awards

3rd PRIZE 2024 of the MistralAI Hackathon: Finalist in teams of 4 in the largest French hackathon ever organized, with more than 250 pre-selected participants. Developed a platform to easily create a language model specialized in a specific task, with performance comparable to the best models on the market.

1st PRIZE 2024 of the IADataHack Hackathon: Organized by the Ministry of the Armed Forces, the goal was to create an image recognition model in teams of 5, competing against 130 other students. Explainability methods (such as Grad-CAM, CHAM, SHAP, etc.) were used to improve the model after its initial training.