



VATOSOA Mananjara Jimmy

Machine Learning · Engineer

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“Nothing is out of reach, as long as you just sit down and take the time to read from the beginning.”

Skills & Certifications

- **ML & AI Expertise** : RAG , LangChain, CUDA Programming, YOLO, OpenCV, Pytorch, TensorFlow, Scikit-learn, ONNX Runtime.
- **Data Analysis & Visualization** : PowerBI, Snowflakes, Matplotlib, Seaborn, Pandas .
- **Programming Language** : Python (Professional level), SQL (Advanced) , {Java , C++} (Intermediate), Bash .
- **Cloud & Ops** : GCP, AZURE, K8S, Docker, MLFlow, GitlabCI, FastAPI .
- **Certification** : **HackerRank** {Advanced SQL, Problem Solving}, NVIDIA CUDA in Python and C++ , AZURE ML , LinkedIn Python Professional Certificate .
- **Languages**: English (Fluent) , French (Bilingual) , Malagasy (Native).

Experience and Projects

SERMA Safety and Security - SERMA GROUP

Rennes, France

MACHINE LEARNING ENGINEER INTERN

Feb. 2024 - Aug. 2024

- Ideated and implemented a ML model to analyze a Printed Circuit Board component using YOLO, OCR and Fuzzy Matching, **reducing component misidentification by 35%** and enhancing data retrieval accuracy.
- Built a fully automated CI/CD pipelines with gitlabCI and MLFlow, **reducing overall time spent on Hardware inspection to up to 50%**.
- Conducted a successful POC on the usage of Graph RAG to query local documents on LLM (Llama3 70B) using Neo4J.
Tech Stack: Python, FastAPI, Pytorch, OpenCV, Neo4J, RAG, LLM, YOLO , Kubernetes, Docker, Ansible, GitLab.

IMT Atlantique - Research

Rennes, France

DATA ANALYST INTERN

May 2023 - Sep 2023

- Identified key factors affecting energy consumption in Cellular Networking and developed targeted strategies to address them.
- Implemented **multiprocessing and LRU cache in Python** to improve computational time, reducing data processing time by +80%.
- Collaborated with network engineers to implement energy-saving strategies based on data analysis, streamlining data-sharing processes.
- Applied the approach to real traffic load data in Rennes, **saving up to 20% of energy.**
Tech Stack: ANFR Dataset, 5G , PowerBI, Pandas, Python, GitLab, Matplotlib, scikit-learn.

Personal Projects

Rennes, France

SYSTEM ARCHITECT AND PROJECT LEAD

2022 - Present

- Led a team of 13 in designing and deploying the SuperApp azplus.mg, orchestrating migration to GCP with a microservices architecture.
- Architected CI/CD pipelines to Kubernetes clusters on AWS(Dev) and GCP(Prod), ensuring zero-downtime releases.
- Established monitoring and logging solutions Octan, proactively identifying and resolving system issues.
Tech Stack: GCP, AWS, Kubernetes, GitLab CI/CD, MinIO, Elasticsearch, Octan.

Videotron Inc.

Cairo, Egypt

JUNIOR DATA ANALYST

2020 - 2022

- Analyzed customer feedback data to identify trends and patterns, **increasing customer satisfaction from 80% to 95%** within a period
- Conducted agent performance analysis, resulting in a 20% improvement in KPI achievements and identifying training needs through PowerBI.

Education

University of Rennes & EIT Digital Master School

Rennes, France

M.SC IN CLOUD AND NETWORK INFRASTRUCTURE, MINOR: INNOVATION AND ENTREPRENEURSHIP

Sept. 2022 - Aug. 2024

- Specialized in Heavy Microservices, Big Data, Distributed Systems, Advanced Cloud Infrastructure, and Fog computing.
- Grade: Good.

Faculty of Computers and AI - Cairo University

Cairo, Egypt

B.SC. IN COMPUTER SCIENCE, MINOR: ARTIFICIAL INTELLIGENCE

Sep. 2016 - Aug. 2020

- Grade: Very Good.
- Secured a mixed Egyptian and Malagasy Government Scholarship for outstanding grades.

Extracurricular Activities and Interests

ELTE University, Informatics Faculty

Budapest, Hungary

SUMMER CLASS WITH ERASMUS+ (SCHOLARSHIP)

Jun. 2023 - 2 Weeks

- Showcased engineering background through an innovative project (V2V Grids) and delivered an engaging pitch. (**Core Values: Leadership, teamwork, pitching, innovation, technology watch, project management.**)

INTERESTS

- Reading , Competitive Programming on Leetcode , Cinema