VATOSOA Mananjara **Jimmy**

MACHINE LEARNING • MLOPS · 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." - Life lesson.

Summary

I specialize in building high-accuracy models using TensorFlow, PyTorch, and OpenCV, while optimizing cloud infrastructures like GCP to reduce costs and enhance performance. With a proven track record of delivering innovative solutions in real-world applications, I excel at transforming technical challenges into scalable, high-performance systems. **I am eager to bring my know-how in ML and Cloud integration to drive impactful results for your team.**

Experience and Projects

SERMA Safety and Security - SERMA GROUP
Rennes, France

MACHINE LEARNING ENGINEER INTERN — *Feb. 2024 - Aug. 2024*
- Ideated and developed a ML model to analyzer a Printed Circuit Board component using YOLO, OCR and Fuzzy Matching, **reducing component misidentification by 35%** and enhancing data retrieval accuracy.
- Led technical architecture discussion with the Pentester team to ensure the feasibility of the solution.
- Built a fully automated CI/CD pipelines with gitlabCI and MLFlow, **reduced overall time spent on Hardware inspection to up to 50%.**
- Developed a POC on the usage of Graph RAG with local documents and Selfhost Llama3 and Noe4J.
  Tech Stack: Yolo, OpenCV, OCR, RAG/GraphRAG, LLM, Pytorch, Kubernetes, Docker, Ansible, Python, 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 ARCHITECTURE AND SCHOOL PROJECT — *2022 - Present*
- Led a team of 13 in designing and deploying the SuperApp azplus.mg, ensuring seamless migration to GCP/Microservices.
- Developed a Euro coin recognizer using OpenCV and YOLO for mobile devices for my girlfriend's coin collection
  Tech Stack: GCP, AWS, Kubernetes, Minio, ElasticSearch, Yolo, OpenCV,Python, Docker, SQL, JAVA.

Videotron Inc.
Cairo, Egypt

JUNIOR DATA ANALYST — *2020 - 2022*
- Developed data-driven strategies that **increased customer satisfaction from 80% to 95%** over a 1 year period
- Conducted agent performance analysis, resulting in a 20% improvement in KPI achievements and identifying training needs.
- Utilized SQL, Excel, and PowerBI to analyze call data and generate actionable insights which enhanced Decision Making.

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 smart city services, big data, distributed systems, advanced cloud infrastructure, and fog computing.
- Grade: Good.

Faculty of Computers and AI - Cairo University
Cairo, Egypt

B.SC. IN ARTIFICIAL INTELLIGENCE, MINOR: INFORMATION SYSTEMS — *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.
- Grade: Excellent.
  Core Values: Leadership, teamwork, pitching, innovation, technology watch, project management.

SKILLS AND INTERESTS
- **Tech Skills**: Advanced proficiency in YOLO, OpenCV, Kubernetes, and Pytorch. Experienced with GCP, Azure ML, and data visualization using Plotly
- **Soft Skills**: Leadership, teamwork, commitment, problem-solving, documentation, engaging presentation, article writing.
- **Certificates**: Deep Learning with Pytorch, ML Pipeline with Azure ML, Data Visualization using Plotly.
- **Languages**: English (C1 - IELTS: 7.5), French (C1), Malagasy (Native).