Carnegie Mellon University Africa

BAIMAM BOUKAR JEAN JACQUES

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SUMMARY
I am a graduate student pursuing a Master of Science in Information Technology, Applied Machine Learning at Carnegie Mellon University Africa. My research and projects interests center on Space Technologies and Machine Learning applications in Earth Observation. My expertise lies in software engineering and cloud computing. I am passionate about the idea of applying these skills and expertise to meaningful space-related projects in a dynamic environment to gain work experience in the space industry.

EDUCATION

Master of Science in Information Technology *Carnegie Mellon University Africa* Specializations: Applied Machine Learning	2024- 2025
Major League Hacking Fellow in Software Engineering *MLH Fellowship* Specializations: Open Source	2023- 2023
Bachelor of Science in Computer Science *ICT University* Specializations: Distributed Systems and Cloud Computing	2020- 2024

PROFESSIONAL EXPERIENCE

Graduate Research Assistant *Carnegie Mellon University Africa, Rwanda.* • Developed and optimized mobile apps for research experiments. • Implemented data pipelines for processing sensor data. • Designed and deployed RESTful APIs to AWS Cloud for ML models, elimination model downtime and unreliability.	2024- 2025
Co-Founder and Solutions Architect *Anora Breast Cancer Research Foundation, Cameroon* • Reduced manual tasks by automating ETL workflows using cron jobs • Designed a HIPPA compliant Breast Cancer Registry data system. • Designed highly available and fault-tolerant system architectures.	2023-2024
Mobile Team Lead *Caasitech Group LLC, Cameroon* • Developed and maintained mobile applications by ensuring seamless integration and optimal performance across Android and iOS platforms (EcoCaasitech, SOS Cameroon). • Automated the deployment process to the Apple Store and Play Store • Implemented unit tests to ensure code quality, resulting in a 60% reduction in post-release bugs. And Implemented observability strategies to understand post-deployment software usage. • Conduct code reviews to enforce QA requirements before merge.	2023- 2024
Software Engineer MLH Intern *G-Research, London*	2023- 2023

• Automated benchmarks data processing with CI/CD workflows and reduced manual processing by 90%. • Automated performance testing and deployment workflows with GitHub Actions which reduced manual processes time by 60%.	

PROJECT WORK

Intellibra (36 months) *Anora Breast Cancer Research Foundation, Cameroon.* • Tools & software: Python, Go, Docker, AWS, Flutter, HuggingFace, Git • Comprehensive kit for early breast cancer detection • Best Digital Project of the year (Automation machine category) • Cameroon International Youth Summit Pitch contest winner • AIM Congress project contest winner • Falling Walls Lab winner	Special Presidential Prize 2024	2021- 2024
SentiAir | Air Quality Monitoring in Rwanda **(4 months)** *Personal Earth Observation Research Project* • Tools & Software: Sentinel 5-Precursor, Copernicus Open Access Hub, Python, NuxtJS, AWS, Git, Github, Raspberry Pi, Go (TinyGo) • Realtime Air Quality Dashboard from Sentiel-5P and In-situ data. • Insights on PM2.5, PM10, NO, SO2 and impacts on air quality.	2024- 2025
Cosmosense (2 months) *Personal Open source project* • Tools & software: Firebase, GitHub Actions, Flutter, Python, Git. • Space exploration mobile app powered by NASA and SpaceX APIs.	2022- 2023

SKILLS & CERTIFICATIONS

- Mobile and Web Applications, Web Scraping, Open Source, Git, GitHub (Advanced)
- Backend, Cloud Computing, Machine Learning, Research (Intermediate)

- NASA Open Science (Intermediate)
- Introduction to Space Missions Design (Intermediate)
- GitHub Foundations (Basic)
- Google Project Management Certificate (Intermediate)
- MLH Fellowship Completion (Advanced)
- AWS Cloud Practitioner (Basic)

INTERESTS & ACHIEVEMENTS

Interests: Machine Learning, Nanosatellites, Space Missions, Earth Observation
Leadership Positions: Google Developer Group Organizer, Google Developer Student Clubs Leader, Postman Student Leader, AWS Cloud Club Captain at CMU, Cameroonian Students Representative at CMU.
Community Volunteering: AWS Community Builder, Open-Source Contributor at MboaLab, AWS Labs, Rwandan Space Agency Outreach Event Volunteer.
Achievements: ICT University Fellowship of Excellence, Cameroon's Top Open Source Contributor, ACTINSPACE 2022 National Winner, Democracy Studio GIS Hackathon Winner, Falling Walls Labs Cameroon 2024 Winner, Special Presidential Prize 2024.