Lucy Muriithi

Cornelius,, NC | wmlucie23@gmail.com | LinkedIn.com/in/lucymuriithi | GitHub.com/lucy | lucymuriithi.com

EXPERIENCE

Software Engineer Resident-HEADSTARTER, *New York, NY*   *Aug 2024 - Present*
- Built 5+ machine learning, ai-engineering and full-stack projects in fast-paced software team environments
- Developed 5+ neural networks in Python, 11 apps in Typescript on AWS/Vercel with dev and production environments
- Implemented llm-chaining, hyperparameter tuning, fine tuning on 10+ LLM models controlling for latency & accuracy
- Coached by Google Machine Learning, Google Kubernetes, Two Sigma, Tesla, Figma and Citadel Engineers
- Created 50+ commits on github with 7-day deadlines getting a Career Capital increase of 70% from start date

Software Engineer Intern- INTERNPULSE, *Lagos, Nigeria*   *April 2024 - June 2024*
- Developed backend services using Python, Django, and Docker, boosting user engagement.
- Implemented RESTful APIs, handling 100K+ requests daily, reducing system errors by 20%.
- Optimized PostgreSQL queries, cutting response times by 25% and improving efficiency by 30%.
- Integrated third-party services, slashing deployment times by 50% using Docker and GitHub Actions.
- Improved code quality by 15% and decreased bug resolution time by 25% through code reviews and debugging.

Software Engineer Intern, UNIVERSITY OF NAIROBI, *Nairobi, Kenya*   *Aug 2021 - June 2023*
- Built Python scripts to automate temperature data collection, expanding coverage to 5,000 square kilometers
- Developed Python workflows at Geospatial Camp, reducing manual work by 25 hours weekly
- Enhanced geospatial data workflows, automating analysis processes to support monthly reporting for over 50 regions
- Designed a dashboard for temperature and land use, providing real-time insights to research teams across 10+ projects
- Created scripts for topographic mapping and land use surveys, decreasing processing time from 3 days to 1 day

PROJECTS

Customer Churn Prediction| Personal Project *(~30 hours)* - Link to Project   *Oct 2024 - Oct 2024*
- Used ML models, Python libraries, SMOTE, Llama 3.1, and Google Colab to build a Churn Prediction system.
- Built a multi-model classifier with Random Forest, XGBoost, SVM, and integrated OpenAI for prediction explanations.
- Applied feature engineering and SMOTE to address class imbalance and used the Ensemble pattern to enhance accuracy.

Welcomi AI Chatbot | Team Project *(~10 hours)* - Link to Project   *Aug 2024 - Aug 2024*
- Used Python, OpenAI Gemini, Vertex AI, and Next.js to build an AI-powered support assistant.
- Integrated Vertex AI for managing and deploying generative models, enhancing scalability and ML model performance
- Implemented RAG to improve information retrieval and response contextuality, creating more accurate AI-driven answers
- Utilized Google Cloud Logging for real-time monitoring and analysis, ensuring consistent response quality and reliability

ComplAI | Published Web-App *(~40 hours)* - Link to Project   *Aug 2024 - Aug 2024*
- Used Next.js, React,, Firebase Firestore, and Material-UI to build a scalable AI-powered complaint management system
- Set up secure Firebase Auth for user authentication, enabling multi-modal complaint submission (text, voice, image, video).
- Integrated OpenAI API for advanced complaint analysis and Google Cloud Text-to-Speech API for processing voice inputs.

TechPrep Interview Simulator| Team project *(~40 hours)* - Link to Project   *Aug 2024 - Aug 2024*
- Used Flask, Flask-SocketIO, WebSocket, OpenAI Gemini, Tailwind and Python to build a real-time interview simulator.
- Built a backend for dynamic Q&A sessions, leveraging WebSocket for real-time and OpenAI Gemini for AI feedback.
- Leveraged Flask-SocketIO for scalable connections and optimized data serialization to support high concurrency.

SKILLS

Languages *Proficient* Python(7yrs) *Intermediate* Javascript(1yr) · SQL(2yrs) *Beginner* Typescript(1yr)

Software AWS · GCP · Docker · Kubernetes · Bootstrap · Git · Bash · Shell · React · Next.js · Django · Flask · PyTorch · Pandas · NumPy · Spark · Firebase · Node.js · Testing frameworks · AI/ML · LLM · Vector databases (Pinecone) · Relational Databases · Fast API · SQL/NOSQL databases · HTML/CSS · Vercel · Rest API · Web API · Jira · Dall-E · LlamaIndex · RAG · Agile Methodologies

Activities

AI Blogs - Published tutorials on AI/ML projects, simplifying complex concepts with step-by-step guidance.   *Nov 2024*
AI Hiring Hackathon - Top-3 in vetted hackathon for building AI-powered complaint app with text, voice, image, video inputs   *Aug 2024*
Technical Keynote - Presented at MUN, discussing digital innovation with global leaders like President Bill Clinton.   *Mar 2022*
Creative: Writing, Vision-board, Public Speaking, Visual Storycraft (Drawing, Photography, Video Editing), Communication skills   *Nov 2024*
Languages: English, Swahili, German, Gikuyu   *Nov 2024*

EDUCATION

University Of Nairobi, Kenya   *Aug 2023*
Bachelors of Science in Geospatial Engineering | 3.59 GPA
Relevant Coursework: Computer Programming, Engineering Mathematics, Calculus, Algebra, Statistics