Robin Mike Muhia Onyancha

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TECHNICAL SKILLS

Programming Languages: Golang, Python, JavaScript, TypeScript
Frameworks and libraries: Django, FastAPI, Gin, Chi, React.js, NextJS, MongoDB, GraphQL, PostgreSQL, MySQL, Docker, Kubernetes, Git
Cloud & Infrastructure: AWS (S3, Kinesis, Lambda, EKS), GCP, Kafka, Prefect, Airflow, FHIR
Software Development Methodologies: Test Driven Development, Agile Development
Data & AI Tools: PyTorch, scikit-learn, Pandapower, PyPSA, Elasticsearch, GrowthBook, Wundergraph

PROFESSIONAL EXPERIENCE

Ovanova, Remote, U.S.A. Mar 2025 – Present

Senior Software Engineer

Design and implement distributed systems powering next-generation **renewable energy intelligence platforms**, enabling predictive control, real-time optimization, and large-scale IoT data ingestion.

- Architected **real-time IoT pipelines** processing telemetry from **LoRa-enabled solar microgrid devices**, handling **~15M sensor messages/month** with **sub-second latency** via AWS Kinesis, Kafka, and Prefect.
- Developed **DAG-driven orchestration** for distributed control workflows (AC charging, storm mode, discharge control) with Prefect and Airflow, improving operational reliability by **40%**.
- Built **Graph Neural Network (GNN) models** for predicting solar generation and consumption patterns, achieving **92% forecast accuracy** over 7-day horizons.
- Integrated **Model Predictive Control (MPC)** with distributed optimization (ADMM) to dynamically balance loads across multi-site microgrids, reducing downtime incidents by **35%**.
- Created and maintained **digital twins** for site-level power flow modeling using Pandapower & PyPSA, enabling faster commissioning and automated anomaly detection.
- Delivered **fault detection algorithms** for PV string and inverter performance anomalies, reducing mean time to repair by **22%**.
- Collaborated closely with hardware teams to align firmware telemetry with analytics ingestion, ensuring end-to-end device-to-dashboard observability.

Savannah Informatics, Nairobi, Kenya Oct 2023 – Mar 2025

Software Engineer

- Scaled **Electronic Data Interchange (EDI)** platform for Kenya's **Social Health Authority (SHA)** from 400 req/sec peak to **13,000 req/sec average**, leveraging Golang microservices, Redis caching, and PostgreSQL optimizations.

- Implemented **federated GraphQL routing** with Wundergraph across Golang microservices, reducing cross-service latency by **19%**.

- Led backend convergence initiative enabling multiple mobile applications to communicate with a unified variant-driven multitenant backend, improving maintainability and reducing server operational costs by 11**%**. (National Cancer Institute Portal, Be.Well healthcare app, UoNAfyaApp360 triple threat awareness app)

- Integrated **feature flagging & A/B testing** with GrowthBook, enabling rapid experimentation without downtime.

- Embedded **Elasticsearch** into in-house CRM, improving search satisfaction score (**CSAT**) to **4.4/5**.

- Launched Advantage Product (A HealthCare Management System) in its Go To Market phase, onboarding over 100 healthcare providers

Schutz Motor Vehicle and Assessors Limited, Nairobi, Kenya Dec 2020 – Oct 2023

Software Engineer

- Developed an end-to-end **insurance claims processing platform** for motor assessors.

- Containerized backends with Docker & orchestrated via Kubernetes/Docker Swarm, achieving **98.93% uptime**.

- Optimized API performance with database indexing and query tuning, reducing **p95 latency by 37%**.

- Implemented CI/CD pipelines with GitHub Actions, automating lint checks, tests, and deployments.

PROJECTS

- **Phantom Wrap:** Developed a website and CRM system for Kenya's largest and premium automobile aesthetics bazaar. The in-house system allows employees to add their own services, various vehicle models, and even has payroll integrations
  Tech stack: Django, NextJS
  URL link : https://phantomwrapafrica.com

- **Meru Hospice:** The challenge was that the hospice needed to start storing data of patients digitally. We thus automated the process by creating a system where the files were scanned and uploaded into the system and patient data could be uploaded in future.

  Tech Stack: FastAPI, React

EDUCATION

Jomo Kenyatta University Of Agriculture and Technology, Nairobi, Kenya
B.S. Actuarial Science

SOFT SKILLS

Soft Skills: Problem-solving, Lifelong learning, Teamwork and collaboration, Effective communication, Drive and Initiative