Abner Onchana

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EDUCATION

Dedan Kimathi University of Technology   Nyeri,Kenya
Bachelor of Science in Electrical & Electronic Engineering   **June 2022 - August 2024**
  (SECOND CLASS UPPER DIVISION)
IBM Skill Network Academy   California,Usa
Backend Development Course   **Jan 2024 - Dec 2024**

SKILLS SUMMARY

- **Languages**: Python, SQL, JavaScript,TypeScript,Vue.js, Nuxt.js HTML/CSS, Shell Scripting

- **Frameworks**: Django, Django REST Framework, FastAPI, Dash, Backtrader, Vue.js, Nuxt.js,gRPC

- **Tools**: Docker, Kubernetes, Git, GitHub, PostgreSQL, MySQL, MongoDB, Redis, Nginx, Apache, InfluxDB,Google BigQuery, Google Cloud Storage (GCS), Google Cloud Build, Google Cloud Monitoring

- **Platforms**: Microsoft Azure, AWS, Google Cloud Platform (GCP), IBM Cloud

- **Concepts**: REST APIs, Microservices, Serverless Architecture, Application Security, CI/CD Pipelines, Time-Series Data Management,Streaming Data Processing, Sentiment Analysis, Cloud-Native Deployments

- **Soft Skills**: Agile Collaboration, Stakeholder Management, Communication, Mentoring, Problem Solving

PROJECTS

Real-Time Stock Sentiment Analytics Pipeline
 *GitHub: **Link***

- Built a real-time sentiment analysis pipeline for stock-related tweets from X (Twitter).
- Integrated TextBlob for sentiment processing and stored results in Google BigQuery and GCS.
- Deployed on Google Kubernetes Engine (GKE) with CI/CD automation via Google Cloud Build.
- Implemented gRPC API to expose sentiment data for external applications.
- Set up Google Cloud Monitoring (or logs for free-tier users) to track sentiment trends.
- Containerized services using Docker and managed deployments with Kubernetes.
- Utilized Git for version control and collaboration.
- **Technologies:** Python, Kubernetes (GKE), Google Cloud (BigQuery, GCS, Cloud Build, Cloud Monitoring), gRPC, Docker, Git

StockPlatform - Stock Trading Web Application

*GitHub: **Link***
- Engineered a full-stack Django application for stock trading, integrating Alpha Vantage API for real-time market data and enabling features like options trading and algorithmic strategies.
- Designed a responsive, centered UI with custom CSS and Chart.js, containerized with Docker and PostgreSQL, and ensured reliability with comprehensive tests.
- **Technologies**: Python, Django, PostgreSQL, Docker, Django REST Framework, JavaScript (Chart.js), Git

EV Charging Station Finder and Management System API

*GitHub: **Link***
- Built a Django REST API for EV station management in Germany, using PostGIS for geospatial queries and Celery/Redis for task processing, secured with JWT authentication.
- Optimized location-based search and operator analytics, deployed as a public GitHub repo with detailed documentation.
- **Technologies**: Python, Django, PostgreSQL (PostGIS), Celery, Redis, JWT, Git

Algorithmic Trading Platform - High-Frequency Trading Research Tool

*GitHub: **Link***
- Engineered a Python-based tool to analyze high-frequency stock data, integrating Alpaca API for real-time streaming and yfinance for 5-day historical data, managed in InfluxDB with Flux queries.
- Designed and implemented Momentum, Mean-Reversion, and Arbitrage strategies, generating signals visualized via Dash/Plotly, and backtested with Backtrader, yielding $9109.53 from $10,000 initial cash.
- Containerized the application and InfluxDB with Docker and Docker Compose, resolving networking and authentication issues, and preparing for AWS/GCP deployment.
- **Technologies:** Python, Alpaca-py, InfluxDB, Backtrader, Dash, Plotly, Pandas, yfinance, Docker, Docker Compose, G

WORK EXPERIENCE

Software Developer Volunteer | Remote, United States of America   **March 25**
    Helpful Engineering | [LINK](#)

- ○ Contributing to the development of a web platform using Microsoft Azure, TypeScript, Vue.js, and Nuxt.js to match supply and demand for essential goods during crises.

- ○ Assisting in AI-driven matching of manufacturing capabilities with disaster relief needs to improve supply chain resilience.

- ○ Collaborating on backend development using TypeScript and Azure cloud services to ensure scalability and efficiency.

- ○ Supporting frontend development with Vue.js and Nuxt.js, enhancing user experience and usability.

- ○ Working with stakeholders to refine platform functionality and optimize supply chain response.

Co-Founder & Chief Technology Officer | Nairobi,Kenya   **December 23 - October 24**
    GeoWattPlus Technologies | [LINK](#)

- ○ Optimized Energy Integration – Developed software solutions for seamless hybrid inverter and lithium battery integration, enhancing efficiency and reliability.

- ○ Battery & Embedded Systems – Designed optimized charging cycles for lithium batteries and implemented real-time data processing for stable energy management.

- ○ Solar Commercial Design & Sustainability – Engineered commercial solar systems with a focus on maximizing renewable energy efficiency and infrastructure integration.

- ○ Cross-Functional Collaboration & Problem-Solving – Worked with hardware and software teams to ensure system cohesion, addressing energy challenges with innovative solutions.

CERTIFICATES

IBM Backend Developer Courser | [CERTIFICATE](#)   **2024**
Certifications & Training

- **Certified Python Developer**: Mastered Python programming through rigorous training, applied in data pipelines, AI, and web development across multiple projects.
- **Docker and Kubernetes Certification**: Gained expertise in containerization and orchestration, evidenced by Dockerized deployments and Kubernetes-ready configurations in project portfolios.
- **Django Web Development Proficiency**: Acquired advanced skills in Django and Django REST Framework, demonstrated by secure, scalable API and web application development.
- **SQL and Database Management**: Certified in relational database design and optimization, utilized in PostgreSQL/PostGIS implementations for geospatial and task management systems.
- **Linux System Administration**: Trained in Linux scripting and automation, enhancing project deployment and operational workflows.

Skills

- **Core Competencies**: Python Programming, Back-End Web Development, REST APIs, SQL and Databases, Object-Oriented Programming (OOP)
- **DevOps & Tools**: Linux Scripting, Version Control (Git & GitHub), Containers (Docker, Kubernetes, OpenShift), Microservices, Serverless Architecture
- **Specializations**: Application Security, Performance Monitoring, Data Pipelines, Real-Time Systems, Internationalization
- **Soft Skills**: Coaching & Mentoring, Attention to Detail, Software Development Life Cycle (SDLC)