




ABNER ONCHANA

CONTACT

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PROJECTS

Projects

Breeze Cafe Order System

A web-based ordering platform for customers to order drinks and special meals in a township.

Technologies: Python, Django, PostgreSQL, Docker, Kubernetes

Personal Profile Website

A personal portfolio website showcasing my skills, experience, and projects.

Technologies: Python, Django, HTML, CSS, PostgreSQL

Sound Organ

An interactive system that plays animal sounds when someone approaches.

Technologies: Python, Jupyter Notebook, Machine Learning (for proximity detection), MongoDB

TaskTracker

A task management system that helps individuals track their daily activities.

Technologies: Python, Django, PostgreSQL, Docker, Kubernetes

Travel App

A transport tracking system that helps individuals monitor public and private transportation.

Technologies: Python, Django, MongoDB, Kubernetes, Docker

TECHNICAL SKILLS

- MySQL
- NoSQL
- SQL
- Data Migration
- SQLite
- Microsoft SQL Server
- Cloud Database Management
- MongoDB
- PostgreSQL
- Django

I specialize in software development, machine learning, data science, and electrical engineering, focusing on optimizing embedded systems. With a bachelor's degree in engineering and hands-on experience, I develop scalable, efficient, and reliable hardware and software solutions. As a backend developer and data scientist, I excel in algorithm development, data analysis, and machine learning to drive impactful business decisions. Passionate about sustainability and cutting-edge technology, I strive to create innovative solutions that enhance performance and efficiency.

EXPERIENCE

January 2024 - Current

Software Developer *Fiverr Freelance*, Nairobi, Kenya

- Developed and implemented software solutions to meet client requirements, enhancing system functionality and user satisfaction.
- Worked closely with other team members to identify and remove software bugs.
- Developed new, efficient and well-tested code for variety of different software projects.
- Led the design, coding, and testing of new software applications, consistently delivering projects within tight deadlines.
- Collaborated across technical and design teams to produce innovative software applications.
- I document code and processes comprehensively, update and improve applications for enhanced performance, and work with cross-functional teams to deliver projects.
- I use version control systems such as Git to manage and track code changes, and continuously learn the latest industry trends, tools, and technologies to stay proficient in the field.

December 2023 - October 2024

Co-Founder & Chief Technology Officer *GeoWattplus Technologies*, Nairobi, Kenya

- Hardware and Software Integration: Optimised software solutions to ensure seamless integration and functionality between hybrid inverters and lithium batteries, for efficient energy management systems.
- Setup and implemented software that enabled real-time monitoring and control of hybrid inverters, ensuring smooth transitions between different energy sources.
- Battery Management: Developed Designs to manage the charging and discharging cycles of lithium batteries, optimising their lifespan and performance, while ensuring energy availability during peak demand periods.
- Embedded Systems Expertise: Gained deep understanding and hands-on experience with embedded systems and real-time data processing, essential for creating efficient, reliable applications.
- System Stability and Reliability: Ensured the stability, reliability, and performance of the energy storage and distribution network through precise hardware and software integration.
- Custom Software Solutions: Leveraged skills in software development to create tailored applications that meet specific client

- Flask
- Kubernetes
- Microservices & Serverless
- Git Version Control
- Python programming
- HTML5 Coding
- RESTful API
- SQL Database Management
- Agile Methodology
- Docker
- Java Programming
- CSS and HTML

SKILLS

- Stakeholder collaboration
- OpenOffice productivity software
- Cross-functional team leadership
- Agile Development & Collaboration
- Design

CERTIFICATIONS

- **Agile Project Management Certifications** – HP, 2025
- **Back-end Application Development Capstone Project** – IBM, 2025
- **Python for Data Science, AI & Development** – IBM, 2025
- **Application Development using Microservices and Serverless** – IBM, 2025
- **Application Security for Developers and DevOps Professionals** – IBM, 2025
- **Data Science & Analytics** – HP, 2025
- **Monitoring and Observability for Development and DevOps** – IBM, 2025
- **Python Data Structures** – University of Michigan, 2025
- **Containers w/ Docker, Kubernetes & OpenShift** – IBM, 2024
- **Programming for Everybody (Getting Started with Python)** – University of Michigan, 2024
- **Developing AI Applications with Python and Flask** – IBM, 2024
- **Django Application Development with SQL and Databases** – IBM, 2024
- **Hands-on Introduction to Linux Commands and Shell Scripting** – IBM, 2024
- **Getting Started with Git and GitHub** – IBM, 2024
- **Introduction to Software Engineering** – IBM, 2024
- **Programming with JavaScript** – Meta, 2024
- **Introduction to Front-End Development** – Meta, 2024

- needs, and enhance the performance of renewable energy systems.
- **Cross-Functional Collaboration:** Worked closely with hardware and software teams to bridge the gap between components, ensuring cohesive and functional integration.
- **Sustainability Focus:** Contributed to the development of sustainable energy solutions by optimising the use of renewable energy sources, and enhancing system efficiency.
- **Solar Commercial Design:** Involved in the design and implementation of solar commercial systems, ensuring optimal energy production, and integration with existing infrastructure.
- **Innovative Problem-Solving:** Utilised problem-solving skills to tackle challenges in energy management, and provide reliable solutions within strict timelines.

EDUCATION

2025

Coursera Backend Dev, Software Engineering

IBM Skill Networks, California USA

- Proficient in Linux scripting, Git and GitHub, Python for AI and data science, and SQL databases
- Experienced in Docker, Kubernetes, and serverless architectures for scalable applications, skilled in application security, monitoring, and CI/CD workflows
- Successfully developed and deployed full-stack applications, integrating databases, APIs, and security measures
- Applied expertise in real-world capstone projects to build a strong portfolio in software development and DevOps

2024

Nano-Degree Machine Learning

UDACITY, California USA

- **Machine Learning and AI Expertise:** Skilled in Python programming with experience in machine learning algorithms, deep learning, and reinforcement learning
- Proficient in artificial neural networks, natural language processing (NLP), and AI applications
- **Technical Skills:** Hands-on experience with TensorFlow, NumPy, Jupyter, Seaborn, Matplotlib, and data processing for supervised learning and predictive analytics

Bachelor of Science in Electrical & Electronic Engineering

Dedan Kimathi University of Technology, Nyeri, Kenya

- **Electrical and Electronics Engineering Expertise** – Graduated with Second Class Honours (Upper Division) from Dedan Kimathi University of Technology, with a strong foundation in power systems, control engineering, and renewable energy
- **Advanced Software Proficiency** – Skilled in industry-standard engineering tools, including Proteus Professional, NI Multisim, LTspice, PowerWorld, and LabVIEW for circuit simulation, power system analysis, and automation
- **Mechanical Engineering Skills** – Hands-on experience in lathe machine operations, sheet metal fabrication, and welding workshops, enhancing multidisciplinary engineering capabilities
- **Innovation & Research** – Active member of Dedan Kimathi Innovators Club, engaging in high-voltage technology, machine learning applications in engineering, and cutting-edge energy solutions
- **Power and Electrical Engineering Expertise** – Strong knowledge in power engineering, electrical products and light electrical applications, with a passion for sustainable energy and engineering education

- **AWS Machine Learning Foundations**
– Udacity, 2023