

EDWIN OGOLA

Full Stack Software Engineer

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🌐 [Website](#)

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Results-driven Full Stack Developer with expertise in JavaScript (React.js, Node.js, React Native), Python, and SQL. Experienced in building scalable web applications for the East African market, with a focus on mobile-responsive and offline-first solutions. Successfully optimized database queries and implemented efficient caching strategies, reducing application load times by 25%. Skilled in Git version control, RESTful API development, and AWS cloud services. Collaborative team player who consistently delivers clean, well-tested code following Agile methodologies. Currently developing an AI-powered plant identification application using computer vision and machine learning technologies.

PROFESIONAL EXPERIENCE

SOFTWARE ENGINEER INTERN

RealBiz Digital | Remote | February 2023 - August 2023

- Developed and maintained web applications using JavaScript, React.js, Node.js, and Express.js, increasing user engagement by 20%.
- Assisted in building and deploying RESTful APIs with MongoDB and Mongoose, reducing data retrieval times by 30%.
- Implemented responsive UI/UX designs using CSS3, HTML5, and Bootstrap, contributing to 10% higher user satisfaction.
- Collaborated with senior developers and design teams to ensure accurate implementation of user-centered designs.
- Executed unit testing and debugging using Jest and React Testing Library, resolving 95% of issues within sprint timelines.
- Applied performance optimization techniques including code splitting and webpack configuration, cutting deployment times by 25%.

FREELANCE FULL STACK DEVELOPER

Self-Employed | Remote | March 2021 - Present

- Designed and developed responsive full-stack web applications for various Kenyan businesses using JavaScript, React, Node.js, Express.js, and MongoDB.
- Key Client: Created custom e-commerce platform for a Nairobi-based retail business with M-Pesa integration, increasing online sales by 35%.
- Key Client: Developed inventory management system for local logistics company, reducing processing time by 40%.
- Implemented state management solutions with Redux and React Context API for seamless data flow across applications.
- Utilized AWS services (S3, EC2, Lambda) for hosting and deploying scalable web applications adapted for regional market needs.
- Optimized database queries and implemented caching strategies, reducing load times by 25% even on low-bandwidth connections.
- Successfully managed project timelines, budgets, and client communication using Agile methodologies.

PROJECTS

AI-POWERED CUSTOMER SUPPORT CHATBOT

[Project Link](#)

- Built intelligent chatbot using Python, TensorFlow, and Natural Language Processing with 95% accuracy for Kenyan e-commerce platform.
- Reduced customer support response time by 40% while increasing customer satisfaction scores.
- Integrated with third-party APIs for automated query resolution, product recommendations, and order tracking.
- Implemented REST APIs for integration with CRM systems, reducing manual data entry by 60%.

Technologies Used: *Python, TensorFlow, NLP, Flask, REST API, JSON, Git, Machine Learning*

E-COMMERCE PLATFORM WITH RECOMMENDATION ENGINE.

[Project Link](#)

- Built a full-stack e-commerce platform optimized for Kenyan SMEs, featuring M-Pesa integration, user authentication, and order tracking.
- Created recommendation engine with scikit-learn that increased average order value by 25% in testing.
- Implemented responsive design for mobile-first usage, critical for the Kenyan market where 80% of web traffic is mobile.
- Designed offline capabilities to handle intermittent connectivity issues common in regional markets.

Technologies Used: *JavaScript, React.js, Node.js, Express.js, MongoDB, REST API, Redux, HTML5, CSS3, M-Pesa API*

INTERACTIVE DATA VISUALIZATION DASHBOARD.

[Project Link](#)

- Created a responsive dashboard visualizing COVID-19 statistics in East Africa using React and D3.js.
- Implemented real-time data fetching from public APIs with efficient state management for low-bandwidth environments.
- Designed interactive charts, maps, and filters for comprehensive data analysis by healthcare organizations.
- Optimized rendering performance through memoization and virtualized lists for smooth operation on lower-end devices.

Technologies Used: *React.js, D3.js, JavaScript, HTML5, CSS3, REST APIs, Redux, Axios*

MICROSERVICES ARCHITECTURE WITH CI/CD PIPELINE

[Project Link](#)

- Architected a containerized microservices application using Docker and Docker Compose, demonstrating scalable deployment options.
- Implemented automated CI/CD pipeline with GitHub Actions for testing, building, and deployment.
- Developed service discovery and API gateway patterns for inter-service communication.
- Configured monitoring and logging with Prometheus and ELK stack for system observability.

Technologies Used: *Docker, GitHub Actions, Node.js, Express.js, MongoDB, RESTful APIs, Prometheus, Jest*

- Developed a GraphQL API for book inventory management with Apollo Server and Express.js.
- Implemented advanced query capabilities including filtering, sorting, and pagination.
- Created a React frontend with Apollo Client for efficient data fetching and caching.
- Designed comprehensive schema with mutations, queries, and custom resolvers.

Technologies Used: GraphQL, Apollo Server, Apollo Client, Node.js, MongoDB, React.js, JavaScript

TECHNICAL SKILLS

Programming Languages: JavaScript (ES6+), Python, TypeScript, HTML5, CSS3/SASS

Frontend Development: React.js, React Native, Redux, Bootstrap, Tailwind CSS, Webpack

Backend Development: Node.js, Express.js, Django, RESTful APIs, GraphQL, Serverless Architecture

Databases: MongoDB, MySQL, PostgreSQL, Firebase

Cloud & DevOps: AWS (Lambda, S3, EC2), Docker, Kubernetes, CI/CD Pipelines, GitHub Actions

Mobile Payments: M-Pesa API Integration, Mobile Money Solutions

AI & Machine Learning: TensorFlow, NLP, scikit-learn, OpenAI APIs, Recommendation Systems

Project Management: Agile Methodologies, Scrum, Jira, Trello, Sprint Planning

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SOFT SKILLS

- Strong analytical problem-solving skills for debugging complex technical issues.
- Effective written and verbal communication across technical and non-technical audiences.
- Collaborative team player with experience in cross-functional development environments.
- Self-motivated learner continuously expanding technical knowledge through projects and courses.
- Adaptable to changing requirements and new technologies with quick learning ability.
- Detail-oriented with focus on code quality, documentation, and best practices.

EDUCATION

BACHELOR OF ARTS IN POLITICAL SCIENCE AND LITERATURE

University of Nairobi | Expected Graduation: 2025

- Applied analytical research methodologies to develop data-driven software solutions.
- Developed strong analytical thinking and research capabilities applicable to software development.

SOFTWARE ENGINEERING PROGRAM

Moringa School | May 2022 - November 2022

- Completed intensive 900+ hour full-stack development program with 95% completion rate.
- Built and deployed multiple real-world projects showcasing proficiency in:

Frontend: HTML, CSS, JavaScript, React.js

Backend: Node.js, Express.js, RESTful APIs

Databases: MongoDB, PostgreSQL

Version Control: Git, GitHub

- **Key Achievement:** Developed a full-stack application that streamlined task management for remote teams, reducing manual processes by 40%.
- Collaborated in Agile development environments, emphasizing sprint planning, pair programming, and clean code practices.
- **Key Contribution:** Led a team project to build an e-commerce platform integrating payment APIs, increasing project scope understanding and delivery speed.

ALX SOFTWARE ENGINEERING PROGRAM

ALX Africa | February 2023 - September 2023

- Selected for a highly competitive software engineering program recognized for producing top-tier global talent.
- Gained expertise in Python programming, algorithms, data structures, and system design.
- **Key Achievement:** Created a scalable Python-based project, a recommendation engine using machine learning algorithms to enhance user engagement.
- Mastered problem-solving through platforms like LeetCode and HackerRank, solving real-world coding challenges to hone technical proficiency. Solved 100+ coding challenges on LeetCode and HackerRank to strengthen problem-solving skills
- Excelled in group projects and open-source contributions, showcasing adaptability, collaboration, and leadership in a team environment.
- Contributed to open-source projects demonstrating collaboration and code quality standards

Cloud Development & DevOps

Self-Led Learning / Ongoing

- AWS Fundamentals: Proficient in using S3, Lambda, and IoT Core for cloud-based applications.
- Implemented CI/CD pipelines with Docker and GitHub Actions for automated testing and deployment.
- *Project Highlight:* Developed and deployed a serverless web app on AWS, optimizing performance and scalability.

CERTIFICATIONS

- AWS Cloud Practitioner (2023)
- freeCodeCamp Responsive Web Design (2022)
- Git & GitHub for Version Control (2023)