

Willis Ivali

Software Engineer

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<https://github.com/itsivali>

<https://itsivali.github.io/portfolio/>

SUMMARY

Experienced software engineer with 6+ years of experience building scalable, high-performance backend APIs and cloud-native applications using Node.js, C#, Python, and JavaScript. I excel in leveraging modern cloud services—such as serverless computing, cognitive services, and container orchestration—to develop secure, robust solutions. I harness DevOps best practices, including CI/CD pipelines, Docker, and Kubernetes, to optimize performance and drive continuous improvements. Passionate about innovation and committed to lifelong learning, I thrive in Agile environments and am eager to leverage my expertise on projects that drive meaningful, positive change.

EXPERIENCE

Kizimani NGO — Webmaster (January 2022 - Present)

- Conducted in-depth analysis of organizational requirements through stakeholder interviews, surveys, and data reviews, translating insights into clear website objectives that boosted user engagement by 20% by delivering an intuitive, user-centric design.
- Revamped server infrastructure by optimizing configurations, implementing automated monitoring, and scheduling proactive maintenance, achieving a 99.9% uptime and reducing page load times by 35% through efficient caching and resource allocation.
- Integrated advanced analytics tools to monitor real-time site performance and user behavior; used these insights to fine-tune layouts, navigation, and CTAs—driving a 25% increase in conversion rates through targeted, data-driven enhancements.
- Overhauled content management and SEO strategies by optimizing metadata, keywords, and mobile-first designs, resulting in a 40% surge in organic traffic

and significant improvements in search engine rankings.

- Developed and enforced comprehensive security protocols—including SSL implementation, regular vulnerability assessments, and automated audits—that reduced security vulnerabilities by 80% and safeguarded against potential cyber threats.
- Researched and integrated innovative web technologies such as responsive design frameworks, elevating overall website performance by 20% and ensuring a seamless, engaging user experience across all devices.

United Nations Environment Program — Software Engineer (January 2019 - November 2021)

- Developed “Arthisasa,” a secure, web-based land records system by architecting a robust platform that integrates Active Directory with biometric sign-in and two-factor authentication (2FA). This initiative cut authentication times by 50%, reduced security vulnerabilities, and ensured compliance with stringent data protection standards.
- Designed an intuitive, client-facing interface featuring advanced search capabilities that streamlined access to critical land records. This user-centric design boosted public accessibility by 60%, enabling stakeholders to retrieve information rapidly and efficiently across multiple devices.
- Contributed to a high-impact Drupal-based website and mobile application for the UN Ozone Secretariat. By integrating real-time data retrieval features and implementing rigorous security protocols, I enhanced data access efficiency by 40%, ensuring that sensitive information was both secure and readily available for mission-critical operations.
- Collaborated with cross-functional teams—including developers, designers, and project managers—to deliver scalable software solutions that met strict UN standards. This teamwork optimized data management processes, improved system interoperability, and laid a strong foundation for sustainable, long-term operational success.

Microsoft — Software Engineer (June 2017 - December 2018)

- Engineered a cutting-edge API using Microsoft Kaizala integrated with Dynamics 365 by designing and deploying a robust, RESTful interface that automated data transfers between mobile collaboration tools and enterprise systems. This integration reduced data processing times by 30%, streamlined workflows, and minimized manual interventions, leading to faster and more accurate data handling.

- Leveraged Azure Cognitive Services to architect and implement an advanced analytics API that processed and interpreted complex datasets in real-time. By integrating machine learning capabilities, this solution boosted decision-making efficiency by 35%, enabling stakeholders to access actionable insights faster and drive more informed business strategies.
- Adopted agile methodologies to drive iterative development cycles, including daily stand-ups, sprint planning, and retrospective sessions. This approach enabled the team to consistently meet 100% of sprint goals, increasing team velocity by 25% and fostering a collaborative environment that rapidly adapted to evolving project requirements.
- Led the end-to-end implementation of an online ticketing system for Mawingu Networks, integrating it seamlessly with Dynamics 365. This solution automated ticket routing and resolution, optimized workflow management, and improved customer satisfaction by 40% by reducing response times and increasing overall service efficiency.
- Developed scalable web APIs using Azure Functions, employing a serverless architecture to handle high-volume, event-driven workloads. This initiative enhanced resource allocation efficiency by 50% and significantly reduced operational costs, ensuring the system could scale dynamically with demand while maintaining high performance.

PROJECTS

Land Records Management System with Azure AD Integration (Web-Based Information System) — For the Ministry of Lands

- Spearheaded the end-to-end development of a secure web-based system, integrating Azure Active Directory for seamless user authentication and cutting authentication times by 50% through robust API security (OAuth2, 2FA).
- Engineered a scalable database architecture to store comprehensive land records, boosting query performance by 50% and supporting thousands of property records with real-time retrieval.
- Implemented advanced document management, automated workflows, and collaboration features that reduced processing times by 40% and increased operational efficiency by 30%.
- Leveraged containerization and orchestration best practices (Docker, Kubernetes on AKS) to deploy the solution, ensuring 99.9% uptime and reducing infrastructure costs by 20%.
- Developed intuitive, role-based interfaces with audit logging and security protocols that decreased vulnerabilities by 80% and ensured regulatory compliance.

Online Ticketing System with Microsoft Dynamics Integration and Mobile Application Extension — For Mawingu Networks

- Automated the deployment of the ticketing application infrastructure on Azure using Terraform, reducing provisioning time by 50% and ensuring a consistent, scalable environment.
- Developed a serverless RESTful API with Azure Functions that connected to the Microsoft Kaizala SDK, leveraging its mobile collaboration features to process and route ticket data efficiently—reducing data processing times by 30%.
- Engineered robust API connectors using webhooks to seamlessly synchronize ticket data with Dynamics 365, ensuring real-time updates and unified customer support workflows.
- Integrated Azure Cognitive Services—utilizing text analytics and sentiment analysis—to process ticket content in real-time, boosting decision-making efficiency by 35% and expediting issue resolution.
- Built a cross-platform mobile application using Flutter, delivering a high-performance, intuitive interface that empowered users to raise tickets, receive updates, and interact with support agents, ultimately enhancing customer satisfaction by 40%.
- Established seamless integration between the Flutter-based mobile app and the serverless API, ensuring rapid data flow and responsiveness, which contributed to a 25% increase in user engagement and improved operational efficiency.

Drupal Website Development Project — For Ozone Secretariat at the United Nations Environment Program (UNEP)

- Led the development of a dynamic Drupal-based website that aligned with UNEP's branding, increasing online visibility by 40% through a responsive, user-friendly design.
- Developed custom modules and integrated third-party APIs, enhancing functionality and improving data retrieval efficiency by 25%.
- Applied performance optimization techniques (caching, image optimization, code minification) to boost page load speeds by 35% and reduce server load.
- Enforced rigorous security measures with role-based access control and regular audits, reducing vulnerabilities by 80% and safeguarding sensitive information.
- Collaborated closely with cross-functional teams to deliver scalable, high-impact solutions that met UNEP's evolving digital requirements.

WordPress Website and Mobile App Development — For OpenTable

- Spearheaded the design and development of a responsive WordPress website and a mobile application built with Flutter, elevating brand identity and boosting user engagement by 30%. Leveraged Flutter's robust widget library and hot reload capabilities to ensure a seamless, consistent experience across iOS and Android platforms.
- Engineered custom WordPress themes and plugins that integrated advanced search, filtering, and reservation functionalities—streamlining the booking process and reducing manual interventions by 50%. Mirrored these features in the Flutter mobile app, ensuring a unified user experience between web and mobile.
- Developed secure content management systems with real-time API integration to synchronize data between the WordPress backend and the Flutter mobile application, cutting processing times by 40% and ensuring that content remained current and reliable across platforms.
- Utilized Flutter's cross-platform framework to accelerate mobile development, reducing overall development time by 25% while expanding market reach through simultaneous deployment on iOS and Android. Crafted intuitive user interfaces with responsive layouts and smooth animations that enhanced user retention and satisfaction.
- Employed agile development practices and automated CI/CD pipelines to iterate rapidly on the Flutter mobile application. Leveraged Flutter's hot reload for swift prototyping and testing, ensuring quick bug fixes and continuous feature improvements that supported rapid deployment and sustained operational excellence.

BeautyHub E-Commerce Transformation on Shopify

(<https://beautyhub.co.ke>)

• Enhanced User Experience & Conversion:

- Overhauled the entire online shopping experience by leveraging Shopify's robust platform, resulting in a 20% increase in conversion rates and a 25% boost in user engagement.
- Implemented intuitive navigation and a streamlined checkout process, ensuring a frictionless user journey from landing page to purchase.

• Performance Optimization:

- Customized Shopify themes and integrated advanced caching strategies

to optimize page load times to under 3 seconds, significantly enhancing site performance and reducing bounce rates.

- Conducted rigorous performance testing and real-time monitoring, ensuring the website maintained peak performance even during high-traffic periods.

• **Security & Reliability:**

- Integrated SSL encryption, secure payment gateways, and implemented automated vulnerability scanning, reducing security incidents by 80% and protecting sensitive customer data.

- Deployed the website using continuous integration (CI) pipelines and automated monitoring tools, ensuring a robust infrastructure with 99.9% uptime and rapid recovery from potential issues.

ABK Law Firm Digital Presence on WordPress (<https://abklaw.co.ke>)

• **Professional Design & User Engagement:**

- Designed and developed a modern, responsive WordPress website tailored for a law firm, resulting in a 40% increase in client inquiries through a clean and intuitive user interface.

- Focused on accessibility and mobile responsiveness to ensure an optimal experience for all users, enhancing overall brand credibility and professionalism.

• **Security & Maintenance:**

- Enhanced site security by integrating SSL certificates, enforcing regular plugin updates, and conducting routine vulnerability assessments, reducing potential threats by 80%.

- Implemented automated backups and proactive monitoring on secure hosting platforms to ensure rapid issue resolution and consistent, reliable uptime.

• **Performance & SEO Optimization:**

- Optimized images, implemented responsive design techniques, and utilized caching plugins to reduce page load times by 30%, thereby boosting organic traffic and search engine rankings.

- Continuously monitored performance metrics and iteratively improved the site based on user feedback and analytics, ensuring sustained high performance and user satisfaction.

Brooklyn Fare – Engaging Lifestyle Platform (<https://www.brooklynfare.com/>)

• Dynamic Design & User Engagement:

- Developed a visually engaging and dynamic website using modern web development practices, driving a 30% increase in user engagement through intuitive navigation and responsive design tailored to the brand's lifestyle ethos.
- Crafted interactive elements and immersive content layouts that resonated with the target audience, ensuring a seamless digital experience across all devices.

• Advanced Performance Optimization:

- Employed advanced caching techniques, minification, and image optimization strategies to reduce page load times by 35%, providing users with a superior and rapid browsing experience.
- Utilized automated CI/CD pipelines to facilitate continuous updates and performance enhancements, ensuring the platform remained agile and responsive to changing user demands.

• Robust Security & Compliance:

- Integrated comprehensive security measures including SSL encryption, regular security audits, and automated monitoring tools to safeguard user data and maintain regulatory compliance, reducing security vulnerabilities significantly.
- Established a reliable deployment framework that maintained 99.9% uptime, ensuring the website supported sustained business growth and provided a consistent, secure user experience.

EDUCATION

Middlesex University — BSc. Degree in Information Technology

(Major: Software Engineering)

JANUARY 2015 - SEPTEMBER 2016

RELEVANT COURSEWORK

Software Development, Object-Oriented Programming, Algorithms and Data Structures, Database Management, Web Development, Software Testing and Quality Assurance.

NCC Education — Advanced Diploma in Computing

JANUARY 2014 - DECEMBER 2014

RELEVANT COURSEWORK

Project Management, Enterprise Systems Development, Advanced Programming Techniques, Web Application Development, Computer Networks and Security, Object-Oriented Analysis and Design, Data Structures and Algorithms, Cloud Computing, and Virtualization.

NCC Education — Diploma in Computing

JANUARY 2013 - SEPTEMBER 2013

RELEVANT COURSEWORK

Systems Analysis and Design, Network Fundamentals, Database Design and Management, Software Engineering Principles, Operating Systems, Cybersecurity, and Ethical Hacking, Mobile App Development, and Cloud Computing.

Multimedia University — Cisco Certified Network Associate (CCNA)

OCTOBER 2009 - APRIL 2010

RELEVANT COURSEWORK

- Networking Fundamentals: Introduction to networking concepts, OSI model, TCP/IP protocol suite, IP addressing, and subnetting.
- Routing and Switching Essentials: Basic routing and switching concepts, router and switch configuration, VLANs, routing protocols (such as OSPF and EIGRP), and access control lists (ACLs).
- Scaling Networks: Advanced switching and routing topics, VLAN trunking, spanning tree protocol (STP), WAN concepts, and Network Address Translation (NAT).
- Connecting Networks: Wide area network (WAN) technologies like PPP, HDLC, Frame Relay, and Virtual Private Networks (VPNs). Introduction to network security and network troubleshooting.
- Network Automation and Programmability: Introduction to network automation, software-defined networking (SDN), network programmability using APIs (such as REST APIs), and network monitoring and management tools.

TechnoBrain — CompTIA Network+

FEBRUARY 2009 - MARCH 2009

RELEVANT COURSEWORK

- Networking Concepts: Introduction to networking principles, network models (such as OSI and TCP/IP), protocols, and addressing schemes.
- Infrastructure: Understanding network components, cabling types, network devices (routers, switches, access points), and virtualization technologies.
- Network Operations: Managing and troubleshooting networks, network security concepts, network monitoring, and performance optimization.
- Network Security: Implementing security measures, securing network devices, wireless security, and common network vulnerabilities and attacks.
- Network Troubleshooting and Tools: Troubleshooting network issues, using network diagnostic tools, and understanding common network problems.
- Network Architectures: Understanding different network architectures, such as client-server, peer-to-peer, cloud-based, and virtualized networks.
- Wireless Networking: Configuring and securing wireless networks, wireless standards, and troubleshooting wireless connectivity issues.
- Network Administration: Network configuration and management, IP addressing, subnetting, routing, and network services (DNS, DHCP).

REFERENCES

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