

# GEORGE NJAU NGUGI

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## Profile Summary

I am a versatile IT professional with 7 years of experience across Software Engineering, DevOps, Quality Assurance, and team management. I bring deep expertise in Docker, Kubernetes, and CI/CD practices, and I excel in leading and mentoring engineering teams to meet goals and ensure high-quality software delivery.

As an Engineering Manager, I focus on performance, team collaboration, and fostering a culture of continuous improvement. I have a proven ability to develop robust QA processes, conduct performance testing, and optimize workflows through strong DevOps practices. With a solid foundation in full-stack development, ETL processes, and scalable application design, I have delivered high-impact solutions using Java, Python, SQL, and Odoo ERP. I am also experienced with AWS and cloud-based data engineering, particularly in ETL projects.

Kaizen is my mantra — I believe in continuous improvement and bring that mindset into every aspect of my work. I am now seeking a challenging opportunity where I can contribute as a Full-Stack Engineer, QA Specialist, DevOps Engineer, or Data Engineer.

## Areas of Expertise

- **Technical Skills:** Quality Assurance, Develops, Product Management Performance, Database Analysis, Data Analysis, Data Science & Engineering, ETL Pipeline creation & DevOps Eng AWS, Automation and Manual Testing, Test Automation, Machine Learning
- **Soft skills:** Teamwork, Leadership, Collaboration, Communication, Problem Solving, Adaptability and Flexibility, Time management, Customer focus
- **Testing Tools:** Selenium, Appium, JMeter, k6, SonarQube      **DevOps Tools:** Jenkins, Docker, Kubernetes, AWS, Frontend Dev Angular
- **Databases:** MySQL, PostgreSQL, MongoDB      **Languages:** Java, Python, JavaScript, API Coding
- **Frameworks:** Spring Boot, Django, React      **Project Tools:** JIRA, Confluence, Gitlab

## QA Engineering Manager | Copia Global | Nairobi, Kenya | Mar 2023 – Present

### *Responsibilities*

- Collaborated with cross-functional teams to align goals, milestones, and quality standards.
- Conducted performance evaluations and provided coaching to QA team members, supporting their growth and development.
- Designed and implemented CI/CD pipelines using Jenkins and GitLab to streamline test and release processes.
- Created a comprehensive bug reporting process, improving the accuracy and timeliness of defect communication.
- Led and mentored a team of 8 QA engineers, delivering major software projects on schedule and within budget.
- Applied exploratory testing techniques to uncover critical defects often missed in scripted tests.
- Established an effective defect tracking system, enhancing bug resolution tracking and overall product quality.
- Introduced a risk-based testing methodology to prioritize issues and ensure high-impact bug fixes before release.
- Oversaw project planning, resource management, and scheduling to ensure timely and successful project delivery.
- Developed a comprehensive test strategy covering unit, integration, system, and end-to-end testing.

- Created and maintained an automated test reporting system to monitor coverage, defect trends, and release readiness
- Collaborated with product and engineering leadership to align QA strategy with business goals and timelines.
- Regularly presented quality metrics and actionable insights to executive stakeholders.
- Led cross-functional initiatives to improve the overall software delivery process and reduce time-to-market.

## Key Milestones

- Decreased critical production bugs by 65% via comprehensive, risk-based testing strategies.
- Achieved a 40% reduction in testing costs without compromising quality or delivery timelines.
- Designed and deployed automated testing frameworks, increasing test coverage by 90%.
- Managed an annual QA team budget of \$500K, optimized tool investments and vendor relationships.
- Served as Assistant Scrum Master for 3 agile teams, contributing to a 95% average sprint completion rate.
- by 35%.
- Mentored and developed junior QA engineers; led recruitment and onboarding of 8 team members with a 90% retention rate.
- Implemented Behavior-Driven Development (BDD) using Cucumber and Python, boosting QA–development collaboration by 50%. Developed and implemented a scalable test strategy for enterprise-level applications, reducing defect rates
- Built and led a high-performing QA team of 12 engineers, achieving 95% test automation coverage across web and mobile platforms, successfully automated test cases for 3 mobile applications using Appium hence reducing manual effort by 80%.
- Reduced regression testing cycle time by 70% through the implementation of scalable automated testing frameworks.
- Improved deployment success rate from 82% to 98% by enhancing CI/CD pipeline automation and establishing quality gates.
- **Notable project: Microservices Migration, Enterprise Data Pipeline**

## Snr Systems Software Engineer | Andela Inc | Nairobi, Kenya | Aug 2022 – Mar 2023

### Responsibilities

- Leveraged Chaos Engineering principles to identify and mitigate performance bottlenecks, enhancing system resilience and uptime.
- Built and maintained a centralized repository for quality metrics and analytics, enabling data-driven decision-making.
- led a cross-functional team of QA/QC engineers to successfully complete a company-wide audit of quality and performance standards.
- Conducted in-depth inspections to ensure compliance with industry regulations, technical specifications, and quality benchmarks.
- Executed performance testing for M-Pesa using K6 and JMeter, ensuring system scalability and uncovering critical performance issues.
- Directed quality assurance initiatives, driving continuous improvement and alignment with industry best practices.
- Partnered with cross-functional teams to align performance and quality objectives with overall business strategy.
- Trained and mentored QA/QC engineers, cultivating a high-performance culture of learning and excellence.
- Developed and deployed proactive monitoring strategies to detect and resolve performance issues before they impacted operations.

### Key Milestones

- Spearheaded system performance monitoring and issue resolution, resulting in a 35% boost in overall system efficiency.
- Developed performance testing frameworks and metrics at Safaricom using JMeter and K6, resulting in a 33% improvement in software resilience and load speeds.

- Led the bug triaging process at Appcues Inc., streamlining issue resolution and reducing bug fix turnaround time by 12%.
- Automated testing of key Appcues Inc. features—such as Pins and Buttons—using the Rainforest QA tool, reducing manual testing efforts by 70%.
- Designed and implemented ETL pipelines and data streaming solutions using Apache NiFi for the QE Data Lake at Safaricom, enabling centralized data access and improved decision-making.
- **Notable Project: Safaricom PLC, Appcues Incorporation**

## Senior Automation Engineer | Copia Kenya | Nairobi Kenya | Sep 2019 – Aug 2022

### *Responsibilities*

- Create and review test cases, preparing them for automation through detailed profiling.
- Develop automation scripts with Selenium and Katalon Studio to automate both functional and regression tests.
- Implement and manage CI/CD pipelines to streamline the GO LIVE process and oversee the integration of automated testing within CI/CD pipelines to ensure smooth deployments.
- Served as Assistant Scrum Master while scripting with Python and Java for Selenium Automate test cases for three mobile applications using Appium and Selenium.
- Design test-driven and behavior-driven testing frameworks for web and mobile applications using Python and Robot Framework.
- Recruit and onboard new talent, including junior employees, for the Quality Engineering team, mentor team members in best practices for test automation and continuous integration.
- Collaborate with cross-functional teams to align testing strategies with project goals and timelines.
- Completed the creation of the Appium framework for automation, facilitating regression testing and saving 2 working days in testing effort.
- Managed a team of 8 QA engineers, driving career development and ensuring timely delivery of company objectives for 2 years, with some team members advancing from junior to senior roles.
- Developed RESTful APIs to extend Odoo functionality, including ordering and SMS modules, enhancing customer-centric ordering processes.
- Wrote SQL stored procedures to automate manual verification tasks, significantly reducing manual effort.
- Collaborated in an Agile environment with cross-functional teams, including project owners and software developers, to ensure timely feature delivery to customers and Leading cross-functional alignment of QA strategies with project and sprint objectives.
- Designing and maintaining scalable test automation frameworks using Python, Java, Robot Framework, and Selenium, enhancing test coverage and execution speed.
- Leading A/B testing initiatives and establishing automated bug-tracking and prioritization systems.
- Reviewing and optimizing manual test cases for automation to ensure efficiency and scalability.
- Designing and executing cross-browser testing strategies across Chrome, Firefox, and Safari.

### Key Milestones

#### **Quality Engineering & Test Automation**

- Developed and implemented integrated automation platforms, improving business process efficiency by 10%.
- Automated test cases for three mobile applications using Appium and Selenium as well as applied TDD and BDD methodologies to web and mobile testing workflows.

#### **CI/CD & DevOps Integration**

- Established and optimized CI/CD pipelines, streamlining GO LIVE processes and reducing deployment time.
- Integrated automated testing into CI/CD workflows, ensuring consistent, high-quality releases.

#### **Data & Analytics Integration**

- Designed and implemented ETL workflows using Apache Airflow for user behavior analytics.
- Built centralized data warehousing solutions in Snowflake for test results and user metrics as well as created real-time QA dashboards to monitor test coverage and bug metrics.
- Integrated data quality checks into pipelines, ensuring 99.9% data accuracy.

### **Team Leadership & Agile Collaboration**

- Recruited, onboarded, and mentored junior QA engineers, contributing to team growth and knowledge sharing.
- Conducted weekly training sessions on test automation tools, QA methodologies, and best practices.
- Authored and maintained documentation for QA standards, best practices, and testing frameworks.
- Build an integrated software platform to automate business processes, boosting efficiency by 10%.
- Spearheaded the transformation of a monolithic application into a scalable microservices architecture
- Reduced deployment time by 75% through the implementation of Docker and Kubernetes
- Enhanced system scalability to efficiently support a 200% increase in user load
- Reduced data processing time by 70% through the implementation of parallel processing techniques
- **Notable project: Microservices Migration, Enterprise Data Pipeline**

## **Lead QA Engineer | Flex pay Technology Ltd | Nairobi Kenya | Jan 2018 – Aug 2019**

### *Responsibilities*

- Automated critical test cases using Katalon Studio and Selenium, reaching 85% test coverage across payment workflows.
- Reduced regression testing time from 5 days to 8 hours through comprehensive test automation strategies.
- Developed and executed detailed test plans, cases, and scripts to ensure top-tier software quality.
- Integrated data science techniques into QA processes to predict defects and improve testing precision.
- Implemented and managed the Software Development Life Cycle (SDLC) to enhance code quality and reduce development time.
- Coordinated with stakeholders to define project scope, timelines, and deliverables, ensuring successful execution.
- Mentored team members in data-driven QA practices and agile project management methodologies.
- Collaborated with data science and engineering teams to align initiatives with QA and product goals.
- Conducted in-depth data analysis to identify and resolve performance bottlenecks, significantly optimizing system performance.

### **Key Milestones**

#### **Performance Testing & Optimization**

- Led performance testing for high-traffic platforms, including Tuskys.com and Flex pay's in-house systems, using Apache JMeter, achieving 99.9% uptime under 100,000 concurrent users.

#### **Test Automation & QA**

- Automated critical test cases using Katalon Studio and Selenium, reaching 85% test coverage across payment workflows.
- Reduced regression testing time from 5 days to 8 hours through comprehensive test automation strategies

#### **Project & Process Management**

- Established a company-wide OKR/KPI tracking system, improving project delivery efficiency by 35%.

#### **Leadership & Collaboration**

- Led cross-functional teams of 20+ members across development, QA, and business units.

#### **Strategic Initiatives & Impact**

- Implemented a CI/CD pipeline, cutting deployment time by 60%.
- Spearheaded business development efforts, leading to a 40% increase in market penetration.
- Architected and launched the Flexpay Payment Gateway, processing 50,000+ daily transactions.
- Reduced payment processing errors by 75% through automated testing and continuous monitoring.

## **Software Engineer & Designer | Tezza | Nairobi Kenya | May 2018 – Aug 2018**

### *Responsibilities*

- Built responsive, user-friendly front-end interfaces using Bootstrap and WordPress.
- Implemented secure patient data management systems leveraging a MySQL back-end.

- Architected and deployed secure, responsive healthcare portals using Bootstrap and WordPress.
- Established and maintained Jira boards for project and time tracking, improving transparency and operational efficiency.
- Created custom WordPress plugins to enhance site functionality and support portability across environments.
- Integrated data analytics tools to monitor and optimize front-end performance and user engagement.
- Collaborated with cross-functional teams to align project goals, technical requirements, and deliverables.
- Mentored junior developers in best practices for front-end design, back-end architecture, and agile project workflows.
- Led continuous improvement initiatives to streamline development processes and enhance deliverable quality.
- Coordinated with clients to define requirements, communicate progress, and ensure satisfaction throughout the project lifecycle.
- Designed and developed system wireframes and mockups for client websites, including [cwwilliams.org](http://cwwilliams.org) and [pulmonaryclinicpc.com](http://pulmonaryclinicpc.com).
- Engineered back-end data storage and communication solutions using MySQL, ensuring performance, security, and data integrity.

### Key Milestones

- Achieved a 60% reduction in page load times through targeted front-end performance optimizations.
- Developed and maintained custom plugins, enhancing site capabilities while reducing maintenance costs by 40%.

**Notable project: C.W. William Community Health Care & Pulmonary Clinic, Mkopa Project**

### Junior Developer | Parity Information Systems | 2017

- Developed ERP modules for inventory and customer management
- Reduced system response time by 40% through query optimization

### Relevant Experience: Project Management

- **Project Planning:** Define project scope, goals, and deliverables.
- **Team Coordination:** Assemble and manage project teams (developers, testers, designers, etc.).
- **Budget and Resource Management:** Estimate costs and manage the project budget.
- **Stakeholder Communication:** Serve as the main point of contact between stakeholders and the team. Provide regular status updates, progress reports, and handle feedback.
- **Risk Management:** Identify potential risks and issues early, develop mitigation plans and manage changes proactively.
- **Quality Assurance:** Ensure project deliverables meet quality standards and user requirements.
- **Tool & Process Management:** Use project management tools (e.g., Jira, Trello, MS Project).
- Ensure adherence to development methodologies (Agile, Scrum, Waterfall, etc.).
- **Project Closure:** Ensure successful delivery and implementation.
- Conduct post-project evaluations and document lessons learned.

### Service to Society

#### Founder/ Chairman Manyaham Limited (2022- 2025)

- Initiated and led the formation of a group venture aimed at pooling savings to purchase and resell prospective land; proud to see the company, Manyaham Limited, successfully operating since 2022.
- As Chairman, provided strategic guidance and oversight to ensure efficient management and accurate tracking of all member contributions. Spearheaded the acquisition of multiple land parcels, contributing to the company's asset growth to over 2.5 million shillings.

## EDUCATION

- Master of Science at University of East London, Remote || FEBRUARY 2023 — JUNE 2024 || master's program Ongoing
- Bachelor of Technology at Technical University of Kenya, Nairobi || JANUARY 2013 — DECEMBER 2017 || Second-class upper Division || Bachelor of Technology in Computer Technology
- Kenya Certificate Secondary Education || Muhoho High School || Kiambu || FEBRUARY 2009 — NOVEMBER 2012 || mean grade of B+
- Psychology at St. Paul's University || Graduated with Distinction || Team leadership and management styles

## PROFESSIONAL TRAINING AND CERTIFICATIONS

- AWS Certified Solutions Architect
- Oracle Certified Professional, Java SE Programmer Certified Scrum Master (CSM) - ISTQB Certified Tester

## Referees

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