ALEX MBUGUA NGUGI

Full Stack Engineer

📞 +254725136341 @ alex.mbugua@outlook.com 🔗 https://www.linkedin.com/in/alex-mbugua
🔗 https://github.com/asce1062

EXPERIENCE

Software Developer

Andela

📅 03/2017 - Present 📍 Nairobi, Kenya

- Increased mentorship connections at Andela using Lenken, collaborating in a scrum team of 12 members to build features for mentee-expert developer interactions
- Delivered major updates, including social login and barcode scanning, on the Andela Resource Tracker android app by leading and mentoring a team of 10 developers
- Placed on partner 2U, where I have been contributing to delivering learning outcomes to millions of students at scale by collaborating with universities and learning institutions

Engineer III

2U

📅 01/2024 - Present 📍 2U Brooklyn, New York, United States

- Collaborated with cross-functional teams, including auth, payments, and platform engineers, to align authentication flows with the broader marketplace transformation strategy
- Increased transaction completion rate by designing robust authentication flows for the Marketplace Transformation initiative
- Enabled seamless checkout sessions between edX and Commerce Tools by integrating authentication logic using Next.js (SSR), Netlify, and Frontastic API Hub
- Secured over 500,000 user sessions per month by enforcing JWT signature verification and managing edge cases such as token expiration and single log-out scenarios
- Maintained authentication service uptime by deploying and monitoring using Datadog, Frontastic.io, and Humio dashboards
- Mentored developers and facilitated professional development

Engineer III

2U

📅 01/2023 - 01/2024 📍 2U Brooklyn, New York, United States

- Enabled secure SSO integration for all enterprise users by designing and deploying a SAML SSO and edX OAuth SSO through Auth0
- Developed API Gateway endpoints and AWS Lambda functions for SSO authentication, serving a user base of more than 200,000 across enterprise clients
- Achieved a reduction in onboarding time by building a self-service orchestrator, allowing enterprise users to configure SSO independently by automating management tasks
- Implemented authentication flows to validate user roles and restrict access based on metadata in Auth0 and Cognito
- Improved OAuth2 connection efficiency for all applications by enhancing the Auth0 Terraform provider to support custom headers by contributing to the open source project

SUMMARY

Alex Is a results-driven, articulate, and analytical Full-Stack Engineer adept at building scalable, secure, and cloud-native systems. A strong cross-functional collaborator, with a tack record of delivering platform-wide tools and infrastructure that drives engineering and business success.

LANGUAGES

English
Proficient ●●●●○

SKILLS

Systems Design | Architecture

Documentation

Change Management

Team Management

Maximising Potential

Priority Management

Process Improvement

Project Management | scheduling

Strategic Thinking | Team Building

TECHNICAL SKILLS

Languages

TypeScript | JavaScript | Python

Go | PHP | SQL | HTML/CSS

Java (android) | C++ | C | .Net

ASM

EXPERIENCE

Engineer III

2U

📅 01/2022 - 01/2023   📍 2U Brooklyn, New York, United States

- Enabled secure access to EDX and GetSmarter by enterprise clients by deploying a federated SSO solution with Auth0
- Improved B2B authentication flow by centralizing SSO for all client organizations, resulting in an increase in login efficiency
- Enabled migration of user accounts to Auth0 by implementing user linking between Cognito and Auth0
- Achieved a reduction in onboarding time for EDX and GetSmarter enterprise clients by collaborating with all cross-functional teams to ensure successful SSO migration

Engineer II

2U

📅 01/2021 - 01/2022   📍 2U Brooklyn, New York, United States

- Implemented a proxy service for authentication between 2U's degree sites and all internal applications with Auth0, ensuring user data parity during transition from OARS
- Reduced auth provisioning time for new programs through automation of all Auth0 configurations using Terraform
- Supported logistration and user management operations by developing and maintaining Lambda functions and serverless services
- Increased user profile completeness by creating progressive profiling pages for richer data collection across platforms

Engineer II

2U

📅 01/2019 - 01/2021   📍 2U Brooklyn, New York, United States

- Developed ViBrAM (Visual Brand Asset Manager), for seamless asset delivery across all 2U's sites and products
- Centralized asset delivery by engineering AWS Lambda and Step Functions for automated synchronization across 100% of 2U's sites and products, Hygraph (previously graphCMS asset manager), and S3
- Supported efficient asset management for all creative team members by collaborating on the ViBrAM-UI frontend

Engineer I

2U

📅 04/2018 - 01/2019   📍 2U Brooklyn, New York, United States

- Increased onboarding efficiency by ensuring synchronization of 100% of new program fields with Salesforce using and internal CMS, OARS
- Reduced UAT time and decreased deploy frequency by ensuring 100% accuracy during program standup
- Resolved manual process challenges, enabling faster deployments by implementing GitHub version control strategies
- Managed post-launch support tickets, supporting program updates and enhancements reducing turnaround times by 80%

TECHNICAL SKILLS

Frameworks

Next.js   React   Node.js   Astro

Tailwind CSS   Bootstrap

Frontastic   WordPress   Django

Flask   Laravel   Angular

Cloud Computing & IAC

AWS   IAM   EKS   Lambda

Step Functions   API Gateway

Secrets Manager   CloudFront

CloudFormation   EventBridge   S3

Cognito   SES   SAM   Route53

Kinesis   Docker   Kubernetes

Terraform

Data Management & Visualization

Postgres   DynamoDB   Redis

Datadog   Kafka   REST API

GraphQL API   Denodo   MSSQL

MySQL   SQLAlchemy

Authentication & Authorization

Auth0   ORY   Keycloak

OAuth 2.0   SAML 2.0   JWT

SSO

EDUCATION

B.Sc. Information Technology

Jomo Kenyatta University Of Agriculture And Technology

📅 09/2012 - 08/2016   📍 Nairobi, Kenya

- Second Class Upper Division
- Majored in Software Engineering
- Developed a .Net and MSSQL application to streamline procurement management for the Public Procurement Oversight Authority of Kenya
- Migrated the existing MS Access database to MSSQL, preserving historical records while Improving workflow efficiency for procurement management and government tender tracking

TECHNICAL SKILLS

Development Tools & Practices

Git   Buildkite   Jenkins   Netlify

CI/CD   GitHub Actions

API Integrations

Agile Methodologies   Jira

Confluence   Lucidchart   Figma

GitHub   TDD   VS Code

Visual Studio

FIND ME ONLINE

Website

https://alexmbugua.me