

# ALEX MBUGUA NGUGI

## Full Stack Engineer

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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	
WordPress	Django	Flask	
Laravel	Angular		

## Cloud Computing

AWS	IAM	EKS	Lambda
Step Functions		API Gateway	
Secrets Manager		CloudFront	
CloudFormation	EventBridge		S3
Cognito	SES	SAM	Route53
Kinesis	Docker	Kubernetes	
Terraform			

## Data Management

Postgres	DynamoDB	Redis
Kafka	Datadog	REST API
GraphQL API	MSSQL	MySQL
SQLAlchemy		

## Authentication

Auth0	SAML 2.0	OAuth	SSO
JWT			

## Development Tools & Practices

Git	Buildkite	Jenkins	Netlify
CI/CD	GitHub Actions		
Slack Integrations			
Agile Methodologies		Jira	
Confluence	GitHub	TDD	
VS Code	Visual Studio		

## EDUCATION

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### 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

## FIND ME ONLINE

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### Website

<https://alexmbugua.me>

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### GitHub

<https://github.com/asce1062>