

# Miracle Toluwase

# Ogunlade

Software Engineer & System Architect

# Profile

**Forward-thinking Problem Solver** with a passion for solving complex challenges through scalable, high-performance systems. A technology polyglot, fluent in multiple modern technologies, programming languages and adept at quickly mastering new technologies and optimizing processes for efficiency and impact, with a proven track record of working effectively in distributed teams and dynamic environments. Well-organized and customer-focused, I bring extensive experience in product development and team leadership.

# ★ Technical Skills

Typescript / Javascript
Elixir
Golang
Python
C
SQL / NoSQL
Messaging & Communication Protocols
Software Architecture & System Design
Cloud & DevOps

## Employment History

**Founding Engineer at Ayika Solutions Ltd, Lagos, Nigeria** November 2024 – Present

- Designed and implemented a unified notification system-, supporting SMS, email, WhatsApp, push notifications, and MQTT messaging through a single interface, ensuring seamless and scalable communication.
- Architected a dynamic event bus and process engine, enabling real-time event processing using a fan-out approach. This system processes events based on pre-configured handlers assigned to specific entity types, allowing for flexible, scalable, and automated workflows.
- Developed a request orchestration system, which manages and coordinates multi-step workflows for user requests. The system supports parallel execution, dependency-based sequencing, and deadline enforcement, ensuring efficient task execution across multiple services and subsystems.

#### Details

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#### Links

Github Linkedin Personal Website - merkll.com

#### Soft Skills

Collaboration & Cross-Functional Communication

Adaptability & Quick Learning

Problem-Solving & Critical Thinking

Technical Leadership & Mentorship

Effective Decision-Making

#### Hobbies

Gaming & Esports, Outdoor Sports, Bird watching, Stand-Up Comedy, DIY & Hardware Hacking

- Designed and implemented a price negotiation system, enabling real-time, structured price discussions between customers and providers while maintaining transparency and fairness.
- Architected the milestone resolution system, ensuring structured, trackable, and enforceable progress tracking for service requests, enabling clear accountability and payment release conditions.
- Led the development of the AI-powered provider matching engine, leveraging AI/ML algorithms and multi-agent coordination to intelligently match users with the most suitable service providers based on expertise, availability, location, and other dynamic factors.
- Designed the wallet and payment system, ensuring secure transactions, escrow functionality, and seamless fund management for users and providers.
- Built the provider metrics and performance tracking system-, enabling data-driven insights into provider performance, service quality, and user satisfaction.

#### Platform Engineer at Murcul Inc (GitStart), California, USA | Remote March 2022 — November 2024

- Developed a service to abstract orchestration of Git-related actions using Gitslice, leveraging Elixir for efficient performance and scalability.
- Architected and optimized a webhook service to handle data processing from external sources, enhancing its capabilities to support multiple consumers and topic filtering by offloading configuration parsing to compile time.
- Engineered a connector architecture enabling bi-directional data synchronization between ticketing systems (JIRA, Linear, GitHub issues) and internal systems, allowing AI-powered ticket refinement, built using Node.js and TypeScript.

#### Founding Engineer at Paycrow, Lagos, Nigeria

January 2020 — March 2022

- Designed and implemented a financial data integrity system leveraging blockchain technology to ensure data immutability and security across transactions.
- Architected and developed the payment request system-, enabling users to create, track, and manage payment requests, attach milestones, and release funds upon milestone completion.
- Designed and implemented a milestone-based escrow system, ensuring contractual compliance by linking monetary inflows to milestones, only releasing funds when predefined conditions were met.
- Architected the core escrow transaction workflow, facilitating seamless deposits, real-time transaction monitoring, and automated payouts, enhancing transparency and trust between buyers and sellers.

#### Team Lead (Client Projects) at Murcul Inc (GitStart), California, USA | Remote

October 2020 — March 2022

- Led the performance optimization of a JavaScript and .NET-based computation engine, heavily utilized by an insurance company for running proprietary algorithms. Achieved a 35% performance boost by reviewing specifications and implementing algorithmic and data structure optimizations.
- Led a team of engineers to develop a high-performance computation library in C++, replicating proprietary insurance algorithms for parsing and computing complex financial data. This library was integrated into an internal dashboard, enabling insurance agents to perform advanced computations efficiently.
- Provided technical leadership, ensuring that projects were delivered on time and aligned with product goals while maintaining the utmost quality

#### Technical project Manager (Client Projects) at Murcul Inc (GitStart), California, USA | Remote

March 2020 — September 2020

- Designed the architecture for a real estate platform using .NET, laying the foundation for its core functionalities. Led the implementation of a CI/CD deployment strategy on Azure, ensuring a smooth and automated release process.
- Architected and contributed to core features of a manufacturing software, including a dashboard for creating and tracking manufacturing workflows and a material consumption tracking system to monitor resource usage across different manufacturing stages.
- Balanced hands-on coding with project management responsibilities, ensuring successful delivery and alignment with client objectives.

#### Software Engineer (Client Projects) at Murcul Inc (GitStart), California, USA | Remote

### December 2019 — March 2020

- Researched and developed the approach for implementing the rebase feature in an internal Git tool that worked with mirrored repositories across multiple cloud platforms and Git providers, including GitHub, GitLab, and privately hosted repositories, to streamline code synchronization processes.
- Collaborated with a senior engineer to architect a high-availability data sync solution across project management tools, utilizing webhooks and Kubernetes.

#### Software Developer at Andela, Lagos, Nigeria

June 2019 — September 2019

• Designed and developed the foundational architecture for a content creation engine, enabling seamless content generation and management. Collaborated in building the UI client that interfaced with this engine, ensuring a smooth user experience.

• Implemented an advanced version tracking algorithm to compute content divergence and maintain a version tree. This system ensured an accurate version history, allowing users to see the correct version when leaving comments on specific content sections.

#### **Software Developer at Askvisory, London, UK | Remote** August 2017 — May 2019

- Led the migration to a serverless architecture, replacing physical servers with AWS serverless services such as Lambda, Elastic Container Service (ECS), Memcached, API Gateway, and EC2. Designed and implemented CloudFormation templates to automate deployment environments, ensuring seamless code
- testing, builds, and updates.
  Designed and co-implemented a data mining system, utilizing parallel-coordinated workers to extract and consolidate data into a PostgreSQL database for downstream processing. Collaborated with engineers to build and optimize system performance.
- Developed the telephony subsystem, integrating Twilio's API for seamless communication between customers and professionals. Ensured accurate session-based billing by integrating it with the billing engine and implemented an automated verification process for completed expert consultations.
- **Designed and helped implement the billing system**, ensuring precise tracking and automated invoicing for expert services.
- Built the professional search and matching engine, collaborating with engineers to develop an intelligent algorithm that ranked professionals based on expertise, location, availability, and legal constraints.

# Education

## Bachelor of Engineering - Metallurgical and Materials Engineeting, The Federal University of Technology, Akure, Akure, Nigeria

November 2012 — March 2018

Completed a thesis exploring the role of nanoparticles in enhancing material strength and durability.

# ✤ Extra-curricular activities

#### Mentor at She Code Africa, Lagos, Nigeria | Remote

June 2020 — August 2020

- Provided mentorship and technical guidance to aspiring female software engineers, helping them develop skills in coding, problem-solving, and career development.
- Supported mentees through hands-on learning and project-based mentorship, contributing to their growth and success in the tech industry.

# **1** ■ References

References available upon request