

# Afam Ugwuanyi

## Software Engineer

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### Experience

<b>Software Engineer</b> <b>Codex-Labs – Project Metamuse</b>	<b>Enugu, Nigeria</b> <b>January 2025 – Present</b>
<ul style="list-style-type: none"><li>· Spearheaded the development of a collaborative NFT platform on the Sui blockchain, enabling real-time collaboration, creation, minting, and trading workflows for digital art.</li><li>· Innovated a real-time collaborative canvas using Fabric.js, Y.js, and Y-WebSocket, achieving ~150ms sync latency between concurrent users with no data conflicts.</li><li>· Crafted a modular backend with authentication, real-time messaging, notifications, email delivery, and CRDT-based collaboration syncing to ensure conflict-free updates.</li><li>· Engineered Sui blockchain integration via smart contracts for NFT minting, ownership verification, and transaction history; Caching system reduced blockchain queries by 90% and application response time by 60%.</li><li>· Built an interactive frontend, reducing latency to ~50ms for dashboard sync and ~30ms for conversations. Integrated REST APIs for NFT marketplace views, creation workflows, and collaborative canvas interactions.</li><li>· Designed and deployed cloud VPS infrastructure, configuring MongoDB, Redis, Node servers, DNS, SSL, real-time monitoring, health checks, and CI/CD. Achieved 80% cost reduction and 75% faster shipping time.</li><li>· Contributed to a scalable architecture handling ~10k concurrent users, optimizing WebSocket channels and Redis pub/sub messaging to maintain system integrity under load.</li></ul>	
<b>Backend Engineer</b> <b>Keenchess</b>	<b>Lagos, Nigeria</b> <b>May 2024 – Present</b>
<ul style="list-style-type: none"><li>· Reorganized codebase structure from a monolithic to a microservices application, eliminating bottlenecks and reducing latency by 30% by integrating an asynchronous message queue system for faster delivery.</li><li>· Introduced a new authentication/authorization system using Django Rest Framework JWT authentication with asymmetric key pairs, enhancing security and compatibility with the microservice architecture. This resulted in a 25% increase in security measures.</li><li>· Implemented CI/CD pipelines, streamlining the development process and reducing deployment times by 40%, which minimized manual deployment efforts and troubleshooting.</li><li>· Created new microservice database models that allowed room for inter-database relationships and syncing, saving 20% storage with effective designs and the elimination of redundant columns</li><li>· Engineered new algorithms to handle chess logic and a new tournament style for the system, taking advantage of Socketio and Apache Kafka to reduce latency and improve the play zone’s speed, reducing latency to ~10ms for chess moves.</li><li>· Built a report ticketing system for handling customer complaints, eliminating the need and cost of integrating a third-party solution, saving production costs by 15%</li></ul>	
<b>Software Engineer</b> <b>FutureDevs</b>	<b>Lagos, Nigeria</b> <b>November 2023 - June 2024</b>
<ul style="list-style-type: none"><li>· Devised a push notification service for web applications with Node JS, eliminating the need for FCM or OneSignal, resulting in a 20% cost reduction and establishing a blueprint for future notification systems.</li><li>· Developed a CRM application, digitizing 100% of records for a car parts and repair firm, resulting in a 40% reduction in planning time and providing real-time business health reports that enhanced decision-making efficiency.</li></ul>	

- Adopted the APIFlask framework, improving API productivity and reducing response times by 30%.
- Collaborated with teams to design and implement scalable database models and backend systems, ensuring efficient data management and improving system uptime by 11%.

<b>Web Development and Python Instructor</b>	<b>Port Harcourt</b>
<b>MR-International</b>	<b>June 2023 - April 2024</b>
<ul style="list-style-type: none"><li>• Orchestrated interactive learning sessions integrating hands-on projects and multimedia resources, narrowing knowledge gaps by 40% and boosting student engagement and retention rates by 25%.</li><li>• Ran short-format hackathons to give students hands-on experience, meeting technical goals under time constraints.</li></ul>	

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## Education

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**Mechanical Engineering**  
University of Nigeria · Nsukka · Present

**Software Engineering**  
ALX · Nairobi · 2023

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## Skills

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**Front End:** HTML, CSS, JavaScript, React, Vue, Next JS, JQuery, Tailwind CSS  
**Back End:** Python, Node JS, Django, Express, Sanic, FastAPI, Flask, APIFlask, PyQt, C, Nestjs, Rust  
**Databases:** MySQL, MongoDB, PostgreSQL, SQLite, Firebase, Supabase  
**Communication:** HTTPS (REST APIs), WebSockets, Socketio, gRPC, RPC, Message Queues, WebRTC, TCP  
**Third-Party Tools:** Git, Docker, Nginx, HAproxy, Heroku, Vercel, DigitalOcean, ImageKit, ApacheKafka, Cloudinary, DataDog, Redis, RabbitMQ, Flutterflow, Adalo, Figma, Canva  
**Practices:** Database design and modeling, Server maintenance, DevOps, Scrum, DSA, Object Oriented Programming, Real-time Collaboration Software, System Administration