

# Itwela Ibomu

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## EDUCATION

### Western Governors University (WGU)

*B.S. in Software Engineering*

Salt Lake City, UT

*December 2026 (Estimated)*

- Relevant coursework: Data Structures & Algorithms; Python; Front-End Web Development; JavaScript

## EXPERIENCE

### Software Engineer

*Dope Marketing*

Jul 2025 - Dec 2025

*Remote (HQ: Minnesota)*

- Built internal AI platform and production APIs that automated account research and data analysis for managers, reducing manual lookup time from hours to minutes.
- Designed and deployed APIs enabling agent access to millions of housing and client records, improving decision speed for leadership teams.
- Delivered three production tools adopted by management, improving research efficiency and enabling scalable automation.

### Software Engineering Fellow (AI/LLM Projects)

*Headstarter*

Jul 2024 - Sep 2024

*Remote (HQ: San Francisco, CA)*

- Led a team of 3 to design and ship CitySwipe, an LLM-powered travel planner (Next.js, LangChain, Pinecone, Supabase) that reached 200+ users and 50K+ impressions.
- Built and scaled five AI web apps using Next.js and LangChain; focused on RAG flows, vector search integration, and prompt engineering to improve relevance.
- Won 1st place out of 300+ teams in a nationwide hackathon for product innovation and execution.

### AI Engineer

*Dataforce*

Apr 2024 - Jun 2024

*Atlanta, GA*

- Improved automated video captioning pipeline using Whisper and OpenCV, reducing captioning error rates by 20% across 200 videos/day.
- Implemented workflow automation and QA checks that increased processing consistency and deployment reliability.
- Built reproducible deployments (Docker) for media processing pipelines and provided operational documentation for handoffs.

### Software Intern

*J.P. Morgan (Forage)*

*Remote*

- Implemented a real-time data visualization tool with 200ms updates using the Perspective library, gaining exposure to enterprise-scale data systems.
- Contributed to performance tuning and front-end data integration for high-frequency dashboards.

## PROJECTS

### Lotus — AI Wellness App | *React Native, Convex, OpenAI, Replicate, App Store deployment*

- Cross-platform AI wellness app (published to the App Store) that generates written content, images, and narrated audio; built and launched independently with paying users and five-figure revenue from album + book bundles.
- Built an API-driven agent pipeline to orchestrate LLMs and multimodal generators for automated title, content, audio narration, and image generation while enforcing the company's content and ethical guidelines.
- Produced audiobook narration used by my father; packaged audio + book bundles and generated five-figure revenue from album and book sales.
- Developed a monetization and pricing strategy by analyzing dozens of model cost/performance tradeoffs to ensure profitable unit economics.

### CitySwipe — AI Travel Planner | *Next.js, LangChain, Pinecone, Supabase*

- Personalized travel recommendations using LLMs and vector search to produce context-aware suggestions and itineraries.
- Designed personalized recommendation flows using LangChain and vector search (Pinecone) to deliver context-aware suggestions.
- Iterated on prompt templates and UX to increase engagement to 200+ users and 50K+ impressions.

#### **RAG — Real-time Contextual Chat** | *Next.js, TypeScript, Pinecone, OpenAI*

- Real-time RAG chat application using vector search to serve contextual answers and improve perceived relevance.
- Implemented vector-search retrieval-augmented generation architecture and TypeScript-first frontend/back-end glue for fast iteration and caching.
- Focused on evaluation and prompt tuning to improve response relevance.

#### **Globetrotter AI — Voice Travel Assistant** | *Flask, Python, OpenAI, Google TTS, React Three Fiber*

- Voice-activated travel planner integrating speech recognition, LLM planning, and travel APIs to produce spoken itineraries.
- Built voice UX and multi-step agent planning flows using LLMs; integrated speech recognition and third-party travel APIs for end-to-end demos.
- Won 1st place at the Headstarter Hiring Hackathon for voice UX, API integrations, and production-ready demo.

#### **Jelly Up! — Instant Video Caption Generator** | *Next.js, Whisper, OpenCV, Docker, FFmpeg*

- Automated subtitles and burned-in captions using Whisper and OpenCV, deployed with Docker for reproducible demos.
- Architected an end-to-end automated captioning pipeline producing SRT and burned-in captions; improved caption sync via frame alignment heuristics.
- Placed 2nd at Headstarter Hiring Hackathon for technical execution and demo reliability.

#### **Job Tracker & Analytics Dashboard** | *Next.js, PostgreSQL, Supabase*

- Automated job tracking workflow and analytics dashboard.
- Built an automated job-tracking and analytics dashboard that reduced job application bookkeeping time by 50% through workflow automation and templated application generation.
- Implemented robust serverless cron jobs and reporting to surface high-value follow-ups and status trends.

### TECHNICAL SKILLS

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**Languages:** Python, TypeScript, JavaScript, React, Next.js, React Native, Node.js, PostgreSQL, Supabase, Firebase, Docker, Pinecone, LangChain, Prompt engineering, Agent orchestration, RAG / Retrieval-Augmented Generation, Vector search (Pinecone), OpenAI, Convex, Replicate, App Store deployment, API design & integration, Audio production & publishing, Monetization & pricing strategy, CI/CD concepts, Cloud fundamentals (AWS/GCP concepts)

**Additional Skills:** UI/UX Design, Product Development, Agile, Leadership, Product analytics