

# Itwela Ibomu

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## EDUCATION

### Western Governors University (WGU)

Bachelor of Science in Software Engineering in Software Engineering

Salt Lake City, UT

Estimated Graduation: Expected Dec 2025

- Relevant coursework: Data Structures & Algorithms, Database Management, Software Design & Architecture, Machine Learning Foundations.
- Developed strong foundations in mathematics, programming, data management, and application design.

## EXPERIENCE

### Headstarter

Long Island City, NY

Software Engineering Fellow

Jul 2024 – Sep 2024

- Built and deployed 5 AI-driven web applications using React (TypeScript), Next.js, Tailwind, Firebase, Supabase, Clerk, LangChain, Pinecone, Docker, and Vercel.
- Scaled multiple web apps to 200+ active users by iterating on user feedback and improving performance and UX.
- Led development of CitySwipe which secured early investment interest and won multiple hackathons.

### Dataforce

Atlanta, GA

AI Software Engineer

Apr 2024 – Jun 2024

- Improved captioning pipeline efficiency by 20% through workflow optimization and automation, increasing throughput and client satisfaction.
- Diagnosed and fixed recurring technical issues in production, reducing error rates and accelerating delivery timelines.
- Collaborated with cross-functional teams to refine requirements and ensure high-quality deliverables.

### Forage (J.P. Morgan Virtual Experience)

Remote

Software Engineering Virtual Intern

Dec 2023 – Jan 2024

- Set up development environment and implemented live graph generation using JPMorgan Chase's open-source Perspective library.
- Completed assigned tasks on time and demonstrated ability to work with financial-data visualization tooling.

### Dope Marketing

Minnesota

Software Engineer

Jul 2025 – Present

- Built an end-to-end AI Agent platform using React, Next.js, Ruby on Rails, and TypeScript integrating the OpenAI Agent SDK, Pinecone, and RAG services to assist account management workflows.
- Implemented secure user authentication, session management, and conversational interfaces enabling account teams to log in, run agent-assisted workflows, and access a centralized knowledge base.
- Designed and maintained a production knowledge-base pipeline: transcribed and processed call recordings (Fathom) into searchable embeddings, normalized and transformed noisy transcription data, and indexed vectors in Pinecone for retrieval.
- Developed custom tools and connectors so agents could call internal APIs and third-party tools (calendar, CRM, docs) to surface relevant, real-time information to users.
- Iterated on product with owner and stakeholders; conducted demos and incorporated account team feedback into weekly sprints to improve accuracy and adoption.
- Metrics: No formal metrics available yet; implemented core platform and knowledge pipeline for production use.

## PROJECTS

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### **CitySwipe (AI Travel & Vacation Planning)**

Jul 2024 – Present

AI-powered vacation planning platform that recommends destinations, itineraries, and booking options using LLMs and vector search.

Technologies Used: Next.js, React, Vercel, Supabase, Gemini, Pinecone, LangChain

- Led product and engineering efforts; grew user base to 50+ active users and achieved thousands of social impressions.
- Secured early investment interest through strategic pitching and demonstrated product-market fit.

### **Job Tracker & Data Analysis Application**

Jan 2024 – Apr 2024

Productivity tool to track job applications, automate workflows, and analyze application success metrics.

Technologies Used: Next.js, React, Node.js, PostgreSQL, Supabase

- Reduced average job application completion time by 50% using automation and streamlined UI.
- Implemented reporting dashboards to monitor application progress and outcomes.

### **RAG 'Rate My Professor' Chat Application**

Aug 2024

Retrieval-Augmented Generation chat app that provides real-time professor ratings and reviews with vector search.

Technologies Used: Next.js, TypeScript, Pinecone, OpenAI

- Built real-time data fetching and vector search to improve accuracy and responsiveness of user queries.

### **MyJobKompass.com**

Career planning and job application assistance web app with AI features for resume and job matching.

Technologies Used: Next.js, TypeScript, PostgreSQL, OpenAI, Pinecone

- Deployed a lightweight web app used by 10+ early users to test job-matching and tracking features.

### **Instant Video Caption Generator (Jelly Up!)**

Aug 2024

Automated video captioning system using OpenAI Whisper and OpenCV to produce accurate subtitles.

Technologies Used: Next.js, React, Docker, OpenCV, OpenAI Whisper

- Developed backend processing pipeline for video transcription and caption embedding; judged 2nd place at Headstarter Hiring Hackathon.

### **Globetrotter AI (Voice-Activated Travel Assistant)**

Aug 2024

Voice-activated AI assistant for travel planning integrating multiple travel APIs and voice recognition.

Technologies Used: Flask, Python, REST APIs, OpenAI

- Designed and implemented full-stack solution; won 1st place at Headstarter Hiring Hackathon for innovation and execution.

### **Lotus (Voice & Multimedia Article App)**

Released Sep 18, 2025

React Native app that orchestrates multiple AI models to generate multimedia articles (text, images, audio) with added wellness features.

Technologies Used: React Native, Replicate, React, Audio Processing

- Implemented multi-step generation pipeline: parallel calls to text, image, and audio generators, post-processing, and bundling into a mobile-friendly article library.
- Built phone library, audio reader, step-tracker, guided meditation flow, music library, and hydration reminder; integrated offline caching and background audio playback.
- Managed App Store submission and release (released Sep 18, 2025).

## SKILLS

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### **Technical:**

Python, JavaScript (React, Next.js, Node.js, TypeScript), React Native, PostgreSQL, Supabase, Firebase, Docker, Pinecone, LangChain, OpenAI, OpenCV, Replicate, Ruby on Rails

### **Additional:**

UI/UX Design, Leadership, Teamwork, Agile methodologies, Product Development, Mentoring

## ADDITIONAL INFORMATION

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**Interests:** Mentoring, Investing, Crypto, Basketball, Gaming, Traveling, Teaching Piano, Guitar, Digital art

**Languages:** English (Native)

**References:** Available upon request