

Ezra Appiah Gyamerah

Software Engineer | Full-Stack Web & AI Agents

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github.com/Ezra-creator | ezra-dev-psi.vercel.app

PROFESSIONAL SUMMARY

Software engineer who designs, builds, and deploys production-ready AI agents and full-stack web applications with TypeScript, React, Next.js, and Node.js. Built a real-time voice and whiteboard AI tutor, a multimodal resale-listing agent, an LLM candidate-screening agent, and a database-backed e-commerce platform, all live on Vercel. B.Sc. Industrial Software Engineering student who learns by shipping.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, HTML, CSS, SQL

Frontend: React, Next.js (App Router), Vite, Tailwind CSS, Zustand, SVG rendering, Web Speech API, Web Audio API

Backend and Data: Node.js, Express, REST APIs, Server-Sent Events (SSE), Supabase (PostgreSQL, Authentication, Storage, Row Level Security)

AI and Agents: Groq (Llama 3.3 70B), Google Gemini API, Function Calling, Agent Loops, Multimodal Vision, Structured JSON Output, Prompt Engineering

Tools and Deployment: Git, GitHub, Vercel, Resend (Transactional Email), npm

PROJECTS

Ezra: Voice and Whiteboard AI Tutor | React 19, Vite, TypeScript, Node.js, Express, Groq ezra-the-tutor.vercel.app

- Built an AI tutor that speaks, listens, and draws on a live whiteboard, using a Diagnose, Explain, Check, Adapt teaching loop that changes its explanation when a student is confused.
- Wrote a custom streaming JSON state machine (StreamingBeatParser) that extracts each complete speech-and-drawing unit as tokens arrive from Groq, so voice and diagrams start within about 100 ms of generation, delivered over Server-Sent Events.
- Designed a structured whiteboard action schema and a deterministic SVG layout engine so the LLM describes relationships while code computes positions, giving fast, predictable, animated diagrams.
- Implemented browser-native speech recognition and synthesis with a sequential audio queue and a text-input fallback; wrote 20 integration test scripts.

Resale Listing Agent | Next.js 14, TypeScript, Gemini, Groq resale-listing-agent.vercel.app

- Built a hybrid AI pipeline that turns 1 to 4 item photos into a condition appraisal, price range, and platform-specific listings for eBay, Poshmark, and Facebook Marketplace.
- Combined Gemini vision for photo analysis with a Groq function-calling agent for reasoning, with enforced JSON schemas at every stage to remove brittle text parsing.
- Kept raw image buffers in a server-side session closure and passed lightweight session IDs through the LLM loop, avoiding large base64 payloads in model context.

Recruiting Screener Agent | Next.js, TypeScript, Groq recruiter-agent-opal.vercel.app

- Built an agent using Groq function calling (Llama 3.3 70B) that screens a resume PDF against a job description with five tools: parse resume, parse job description, score fit, identify gaps, and generate interview questions.
- Logged every tool call as an inspectable trace and used JSON-mode output at each step; extracted PDF text with pdf-parse.

Cary Grant Clothing E-Commerce Platform | Next.js, TypeScript, Supabase cgc-theta.vercel.app

- Built a full e-commerce site for a Barrie, Ontario retailer with cart, three-step checkout, customer accounts, and order history; integrated Resend for branded order emails and Zustand for cart state.
- Designed a Supabase PostgreSQL schema secured with Row Level Security and authentication; built a hidden admin dashboard for product management with image upload and order status tracking.

Additional Projects

- Soul Restaurant Website (HTML): built and deployed a restaurant website on Vercel (soul-restaurant.vercel.app).
- MyFlow (team project, DCIT 208): developed front-end screens for a reproductive health tracking app as part of a student software engineering team.

EDUCATION

B.Sc. Industrial Software Engineering (in progress) | Pentecost University, Ghana