

JUSTIN JOHNSON

Applied AI Engineer

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PROFESSIONAL SUMMARY

Applied AI Engineer with over a year shipping production agentic systems, RAG pipelines, and LLM infrastructure. Deployed 6+ autonomous AI agents replacing manual workflows across legal, compliance, testing, support, and data operations. Led enterprise adoption of ChatGPT Enterprise, AWS Bedrock, Cursor, and Claude Code for 50+ staff with guardrails, evaluation frameworks, and cost controls. Combines deep Python/AWS/LLM expertise with cross-functional technical leadership and creative production skills.

EXPERIENCE

Applied AI Engineer | Pinger, Inc.

San Jose, CA | Jan 2025 - Present

- Architected and deployed 6+ production AI agent systems automating legal workflows, compliance verification, mobile app testing, customer support, and data operations — compressed multi-day manual processes into automated pipelines running in minutes to hours
- Designed multi-agent RAG architecture for Customer Support AI Assistant using AWS Bedrock, vector databases, and 4 specialized agents (Helpdesk, Slack, Macros, Summarizer) querying multiple knowledge bases with citation tracking and confidence scoring
- Built automated mobile app testing system using Claude Code + mobile-mcp with self-monitoring agents that detect and correct UI overlay issues in real-time — 100% clean screenshot accuracy with reusable app context indexing for intelligent test planning
- Created AI-powered website compliance verification agent using Playwright and Claude API for A2P/SMS regulatory checks — validated against a labeled production test set with structured PASS/FAIL/REVIEW verdicts; 8-15s per site
- Engineered automated legal document extraction pipeline processing Zendesk subpoenas — 96%+ field-level accuracy with schema validation, confidence scoring, and full audit logging for compliance traceability
- Led enterprise-wide AI tool adoption: rolled out ChatGPT Enterprise, AWS Bedrock, GitHub Copilot, Cursor, Claude Code, HuggingFace Enterprise — authored org-wide governance guidelines, data privacy policies, and approved tool frameworks
- Cut LLM inference costs 25–40% and p95 latency ~40% through prompt optimization, model selection, prompt caching, and canary rollout pipelines with evaluation dashboards
- Built agentic event tracking system integrating Google Sheets, Slack API, and internal analytics — automated detection of product rollouts, abuse events, and ad operations changes with cron-scheduled autonomous execution
- Developed generative BI system converting natural language queries to SQL for self-service analytics on Redshift data warehouse
- Trained 50+ staff across engineering, product, marketing, and support on prompt engineering, safe AI agent development, privacy compliance, consent logging, and auditability

Technical Support Specialist | Pinger, Inc.

San Jose, CA | Apr 2022 - Jan 2025

- Provided technical support for Pinger's consumer messaging products, resolving escalated issues across iOS, Android, and web platforms for millions of users
- Collaborated cross-functionally with engineering and product teams to surface and prioritize recurring user-facing bugs and platform issues
- Built early automation tooling and internal dashboards that surfaced product abuse patterns — work that directly led to transition into the AI Engineer role
- Won Pinger Hackathon 2023 building "Sumi" — a Chrome extension using LLMs to summarize web pages and Zendesk tickets; built "Bizzy" business-plan generator deployed on HuggingFace (2024)

Founder & Technical Consultant | Lyoko Studios LLC

Austin, TX (Remote) | Mar 2020 - Apr 2022

- Ran an independent studio delivering software automation, web development, and music/audio production services for clients

- Built custom Python automation and web tooling for client workflows — hands-on engineering that laid the foundation for the move into AI engineering

Technical Support Specialist | MassMutual (Contractor, Lyoko Studios LLC) *Springfield, MA | Feb 2019 - Mar 2020*

- Led company-wide transition to remote work during COVID-19, serving as the primary IT resource for 200+ employees via Zoom and TeamViewer
- Provided Level 1 helpdesk support including hardware/software troubleshooting, Active Directory management, and VPN configuration

IT Support Specialist / CSR | Uzurv

Richmond, VA | May 2018 - Feb 2019

- Managed ride service requests and customer escalations using Salesforce CRM, resolving issues via phone and email support

PORTFOLIO PROJECTS

RLS — AI Record Label Simulation

Built a multi-agent AI record label from first-principles study of 19 labels (Motown through Brainfeeder). Specialized agents handle A&R, release management, sync licensing, creative direction, and artwork generation. Full MCP integration layer connecting agents to Google Calendar, Gmail, iMessage, and Bandcamp. Includes audio analysis pipeline, stem separation, roundtable verdict system, and AI-generated artwork.

Tech: Python, FastAPI, SQLite, Multi-Agent Orchestration, MCP, Twilio, Claude API

Music Genie — Local AI Music Generation Pipeline

Engineered a FastAPI job broker unifying multiple AI music generation backends under a single API. Supports ACE-Step 1.5 / ComfyUI for full song generation with lyric alignment, rapid audio sketches, and dedicated endpoints for cover generation, audio extension, stem separation, and MIDI extraction.

Tech: Python, FastAPI, ComfyUI, ACE-Step 1.5, uvicorn

Mvove — Community Food Bank Platform

Full-stack platform connecting food banks with recipients and volunteers. Fastify + Prisma + BullMQ backend, Expo/React Native cross-platform frontend, and a FastAPI Python service powering volunteer coordination and AI agent chat flows. Geolocation-based resource matching via Mapbox and payment processing via Stripe.

Tech: Node.js, Fastify, Prisma, PostgreSQL, Redis, Expo, React Native, FastAPI, Mapbox, Stripe

TECHNICAL SKILLS

Programming & Data: Python, SQL, JavaScript, TypeScript, React, Bash

AI & LLM Engineering: Large Language Models (LLMs), RAG, Multi-Agent Orchestration, Agentic AI Systems, Tool/Function Calling, Agent Memory Architectures, Prompt Engineering & Evaluation, Vector Databases, Embeddings, Semantic Search, NLP, Deep Learning, Guardrails & Safety, Model Context Protocol (MCP)

Frameworks & Libraries: LangChain, LangGraph, Hugging Face Transformers, FastAPI, Playwright, PyTorch, scikit-learn, pandas, CrewAI

Cloud & Infrastructure: AWS (Bedrock, Lambda, S3, ECR, SageMaker), Docker, Kubernetes, CI/CD Pipelines, MLOps, REST APIs, Microservices

Platforms & Tools: OpenAI (ChatGPT Enterprise, Custom GPTs, Agents SDK), Claude Code, Cursor, GitHub Copilot, Zendesk, Jira, Confluence, Splunk, Git

Creative & Production: Blender, Unreal Engine, Unity, Music Production & Audio Engineering

EDUCATION

Bachelor of Science in Biomedical Engineering

Virginia Commonwealth University | Richmond, VA | 2013 - 2018