

# Juan Miguel Sanchez

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Software Engineer | TypeScript, React, Python, LLM, RAG | London, UK | Irish Citizen (Right to Work in UK)  
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Computer Science graduate who builds and delivers technical solutions for non-technical users. Solo-designed, built, and shipped HymnDeck: a live SaaS product developed through iterative requirements gathering with real clients, cutting a 2-hr recurring task to 15 mins. Experienced across TypeScript, Python, C#. Comfortable working with stakeholders to translate business needs into working software.

## Technical Skills

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- Languages: TypeScript, Python, C#, SQL
- Frontend & Backend: React, Next.js, Tailwind, FastAPI, REST APIs, Docker, asyncio, Google Cloud Platform (GCP), Cloud Run, Compute Engine, Firebase, Vercel, Fly.io, RunPod, Neon, PostgreSQL
- AI/ML: LLM APIs (OpenRouter), RAG, LLM fine-tuning (Unsloth), vector DB (Pinecone), LangGraph
- Tools: Git, CI/CD, git worktrees, agentic AI coding tools (Claude Code, OpenAI Codex)

## Technical Projects

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**HymnDeck** | TypeScript, Next.js, Tailwind, Python, FastAPI, SQL, GCP Cloud Run, OpenRouter | Mar 2026

- Solo-shipped a workflow automation SaaS. Automates weekly PowerPoint church slide creation from 2 hours to 15 mins. Iteratively developed with requirements gathering from churches.
- Stack: Next.js/React/TypeScript frontend, FastAPI/Python backend, PostgreSQL, Firebase auth, Lemon Squeezy billing, python-pptx, OpenRouter, Zustand. Deployed with Vercel, GCP Cloud Run, Docker, and Neon DB. Optimised for low costs, fast cold starts, and scalable infrastructure.
- Turborepo (Next.js + FastAPI) with one-command local stack, and a 4-stage Docker build using uv.
- Implemented concurrent LLM agents, agent retrying, and fallbacks. Used SSE to show live progress.
- Owned architecture, scoping, and code review end-to-end; used agentic AI coding tools and git worktrees to accelerate development. | [Live Website: https://hymndeck.app](https://hymndeck.app)

**House MD Chatbot** | TypeScript, Next.js, Tailwind, Python, FastAPI, Unsloth, RunPod, Pinecone | Oct 2025

- Fine-tuned Qwen3-4B using Unsloth on GCP Compute Engine, trained on House MD transcripts and synthetic data. Deployed across distributed cloud: RunPod GPU, Fly.io backend, Vercel frontend.
- RAG pipeline over 500+ Wikipedia articles using Pinecone | [Frontend Repo](#) | [Backend Repo](#) | [Demo](#)

**PowerPoint Automation Tool** | Python, python-pptx, Tkinter | Dec 2024

- Engineered Python desktop app to reduce slide preparation workflow by from 2 hrs to 15 mins. Active use by 7-person volunteer team. Designed for non-technical users. | [GitHub Repo](#)

**Virtual Reality Language Learning App** | Unity, C#, Python, FastAPI, Gemini, LangGraph | May 2025

- Built a VR language learning app using Unity, FastAPI, & LangGraph. Engineered multi-agent system (writer/director pattern). Used cascading speech-to-speech (Whisper to Gemini to EdgeTTS).

## Experience

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**Volunteer AV Team Lead - Church Ministry** | Sep 2022 - Jul 2025

- Led 7-person team across 110+ broadcasts. Coordinated production, training, and troubleshooting.
- Identified workflow inefficiencies and built Python automation tool used by entire team.

**Freelance Web Development** | Shopify, Liquid, JavaScript | Jan 2024

- Delivered responsive Shopify e-commerce website; from requirements gathering to deployment.

**Volunteer Live Streamer - Church Events** | Mar 2021 - Present

- Managed live streaming infrastructure for church events up to 1,000+ concurrent viewers.

## Education

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Queen Mary University of London, BSc Computer Science, 2:1 | Graduated July 2025