# Alejandro Sánchez Yalí
## Full Stack Developer

 LET'S CONNECT

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## SUMMARY

Full Stack Developer with 5+ years of experience building robust, scalable web applications across frontend and backend. Strong background in mathematics and software engineering. Skilled in modern JavaScript/TypeScript frameworks (React, Next.js), Python (Django, FastAPI), and cloud infrastructure. Experienced in integrating AI/ML services, developing RESTful and GraphQL APIs, and delivering production-ready solutions with a focus on code quality, testing, and DevOps best practices.

## TECHNICAL SKILLS

- **Languages:** Python (7+ years), JavaScript/TypeScript (5+ years), SQL, C, Rust
- **Frontend:** React.js (6+ years), Next.js (5+ years), TypeScript, Tailwind CSS, Redux, Zustand, Shadcn UI, Ant Design, SASS
- **Backend:** Django, FastAPI, Flask, Node.js, Express, NestJS, RESTful APIs, GraphQL
- **Testing:** Vitest, Jest, TDD, Unit/Integration Testing
- **AI/ML Integration:** LangChain, LLMs, Whisper, TensorFlow, PyTorch, Scikit-learn
- **Data Engineering:** ETL pipelines, Pandas, NumPy, web scraping (BeautifulSoup, ScrapeGraph, Selenium)
- **Databases:** PostgreSQL, MongoDB
- **Cloud/DevOps:** AWS, GCP, Docker, GitHub Actions, CI/CD pipelines
- **Software Engineering:** Clean Architecture, SOLID principles, Version Control (Git)

## EXPERIENCE

**Independent IT Consultant** — Aug 2024 – Present
*Freelance* — *Remote*

- Delivered end-to-end web applications for business clients, including frontend (React.js, Next.js, TypeScript) and backend (Python, FastAPI, Django, Node.js, NestJS)
- Developed and deployed solutions for sports club management, medical scheduling, and AI-powered learning platforms
- Implemented payment integrations (Stripe), containerization (Docker), and CI/CD pipelines

**Full Stack Developer** — Apr 2021 – Aug 2024
*Monadical* — *Remote, Canada/US*

- Built and maintained full stack applications using Python (Django, FastAPI), JavaScript/TypeScript (React.js, Next.js)
- Designed and implemented RESTful and GraphQL APIs, scalable backend systems, and modern frontend interfaces
- Integrated AI/ML services and LLMs into production web apps
- Led frontend architecture, reusable component libraries, and advanced testing strategies (Vitest, Jest, TDD)
- Managed cloud deployments on AWS and GCP, using Docker and CI/CD

**Full Stack Developer**                                      Aug 2018 – Oct 2020
*BCFort*                                                      *Medellín, Colombia*

- Developed blockchain and analytics platforms with Python (Django), Node.js, React, and Web3.js
- Built decentralized app frontends, implemented smart contracts, and managed cloud infrastructure (AWS, GCP, IBM Cloud)
- Led data analytics and visualization solutions for blockchain transactions

**Professor**                                                      Jan 2010 – Oct 2021
*Universidad de Antioquia*                                    *Medellín, Colombia*

- Taught advanced courses in Machine Learning, Data Science, and Mathematics using Python, NumPy, Pandas, TensorFlow, PyTorch, and Scikit-learn
- Mentored research and student projects in ML, data analysis, and software development
- Developed curriculum for programming, mathematics, and ML

## FEATURED PROJECTS

- **Morpheus – AI Image Generation Platform** ⬀

    - Full stack open-source platform for AI image generation using Python, React, and stable diffusion models. Implemented RESTful APIs, ML model integrations, and cloud infrastructure with Docker and AWS.

- **Zippy – Interactive AI Avatar** ⬀

    - Built a Next.js-based talking avatar integrating OpenAI API and Azure Cognitive Services. Developed TTS synthesis and seamless backend-frontend integration in Python and TypeScript.

- **Digital Human – Interactive AI Avatar** ⬀

    - Engineered a conversational AI system with OpenAI GPT, Whisper, and Eleven Labs. Implemented real-time data processing and lip synchronization.

## TECHNICAL WRITING

- **Zero-Shot Text Classification** (Sep 2024)
- **Neural Networks as DAGs of Parameterized Computational Programs** (Aug 2024)
- **Revolutionizing Animation: Building Digital Humans with LLMs** (Jul 2024)
- View more articles ⬀

## CONFERENCE TALKS

- **Scaling Learning Models: Parallelism Strategies in JAX with Flax – PyCon** ▶ (2024)

    - Presented strategies for scaling machine learning models using JAX and Flax
    - Discussed parallel computing techniques for efficient model training

## EDUCATION

**Master in Mathematics**                                      Aug 2010 - Sep 2013
*Universidad de Antioquia*                                    *Medellín, Colombia*

**B.Sc. in Teaching Mathematics and Physics**                 Jan 2004 - Oct 2009
*Universidad de Antioquia*                                    *Medellín, Colombia*