Alejandro Sánchez Yalí

Full Stack Software Developer | AI/ML

✉ asanchezyali@gmail.com | in asanchezyali | ○ asanchezyali | ⊕ asanchezyali.com

SUMMARY

I'm a Software Developer with over 5 years of experience creating robust and efficient solutions across frontend and backend applications. With a strong background in mathematics, I specialize in integrating emerging technologies into real-world projects to deliver innovative and impactful results.

TECHNICAL SKILLS

- **Languages:** Python, JavaScript, TypeScript, Rust, C

- **Frontend:** React.js, Next.js

- **Backend:** Django, FastAPI, Flask, RESTful APIs

- **AI/ML Integration:** LangChain, LangGraph, ScrapeGraph, Whisper, LLMs, TensorFlow/PyTorch

- **Databases:** PostgreSQL, MongoDB

- **Cloud/DevOps:** AWS, GCP, Docker, GitHub Actions, CI/CD pipelines

EXPERIENCE

Full-stack Developer   Apr 2021 – Aug 2024
Monadical   *Remote Job - Canada/EEUU*

- Developed and maintained full-stack applications using Python, Django, and React, focusing on scalable architectures
- Built and integrated AI services for information retrieval using large language models
- Designed and implemented RESTful APIs for data-intensive applications

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

- Taught advanced courses in Machine Learning, focusing on practical implementations with Numpy, Pandas, TensorFlow, PyTorch and Scikit-learn
- Mentored research projects in Category Theory and ML applications

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

- Led development of blockchain solutions with Ethereum and Hyperledger
- Managed cloud infrastructure on AWS, GCP, and IBM Cloud

FEATURED PROJECTS

- **Morpheus - AI Image Generation Platform** ⬈
  - Contributed to building a full-stack open-source platform for AI image generation using Python, React, and stable diffusion models
  - Implemented RESTful APIs and scalable architecture for handling ML model integrations
  - Developed infrastructure as code using Docker, Kubernetes, and AWS services

- **Zippy - Interactive AI Avatar** ⬈
  - Built a Next.js-based talking avatar using Azure Cognitive Services and OpenAI API
  - Implemented text-to-speech synthesis with synchronized lip movements using Azure's viseme generation
  - Created seamless integration between OpenAI's language models and Azure's speech services

- **Digital Human - Interactive AI Avatar** ⬈
  - Engineered a conversational AI system integrating Open AI GPT, Whisper, and Eleven Labs
  - Implemented real-time lip synchronization creating seamless human-AI interaction

TECHNICAL WRITING

- **Zero-Shot Text Classification** (Sep 2024)
  - Analysis of modern approaches to zero-shot learning in NLP

- **Neural Networks as DAGs of Parameterized Computational Programs** (Aug 2024)
  - In-depth exploration of neural networks from a differentiable programming perspective

- **Revolutionizing Animation: Building Digital Humans with LLMs** (Jul 2024)
  - Technical guide on implementing AI-powered digital avatars

  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   Sep 2013
Universidad de Antioquia   *Medellín, Colombia*

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