



# Jacob Chaffin

Fullstack Engineer | Voice AI

## 👤 Profile

Dynamic Fullstack Engineer with 5+ years of experience specializing in Voice AI and conversational technologies. Expertise encompasses building advanced real-time voice AI infrastructures and developing modular UI components that enhance user interaction. Proficient in leveraging technologies such as Node.js, Typescript, and Python to create efficient, latency-optimized solutions. Known for integrating complex APIs and modernizing analytics pipelines to drive insightful data-driven decisions. A proven track record in delivering innovative software solutions that elevate user experience and operational efficiency.

## 💼 Employment History

### Infra + Product at prosody.ai

2024 — Present

- Built a real-time voice AI infrastructure platform that injects phonetic tone and emotional context into LLMs via a multimodal pipeline.
- Designed and deployed latency-optimized microservices for acoustic feature extraction, tone modeling, and token conditioning.
- Integrated WebSocket + REST APIs with Whisper, GPT-4, and LangChain agents for live sentiment augmentation.
- Created SDK and open API spec; deployed dashboard in Next.js + WebRTC with real-time charts using Recharts.
- Led full-stack architecture including Dockerized backend, CI/CD workflows, LLM fine-tuning, and synthetic data generation.

### Software Engineer at Uniphore, Hybrid

June 2021 — October 2024

- Developed modular UI components and dynamic pages for agent-assist tools using **Next.js**, **React**, and **GraphQL**, integrating live ASR and voice analytics.
- Engineered real-time sentiment visualization layers with phonetic and lexical embeddings for enhanced client-side rendering.
- Streamlined SSR/ISR logic for data-heavy voice sessions, improving initial load times by 35%.
- Modernized analytics pipelines to support LLM-driven conversational interfaces, implementing deep tone-aware inference.
- Built internal analytics tools with **NumPy**, **Pandas**, **Jupyter**, and Python for behavioral insights.

## Details

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## Links

[Github](#)

[LinkedIn](#)

[Website](#)

## Skills

Node.js

Typescript

Python

LLMs

Conversational AI

GraphQL

NLP

Rust

## AI Associate at Wave Computing, Campbell, CA

June 2018 — September 2020

- Built custom TensorFlow ops to simulate neural network execution on the DPU Compiler, enabling early validation of operator behavior and alignment with hardware constraints.
- Developed and optimized neural networks for audio and vision classification using PyTorch.
- Designed and maintained an interactive visualization tool for error tracing on Wave's proprietary DPU-based compiler.
- Developed full-stack admin tools with Node.js, React, and GraphQL for secure login and data transfer to AWS S3, deployed via Docker containers. Reduced API payload size by 40% and streamlined file management workflows.

## 🎓 Education

### BS, University of California, Los Angeles

September 2017 — December 2020

Linguistics and Computer Science

## ★ Projects

### ImageCraftAI

January 2025 — July 2025

Batch image generation platform for ecommerce. Takes a product catalogue and generates images for each product using Stable Diffusion. Results can be fine-tuned using sample images, text prompt or speech to text.

### VoiceSentiment

April 2025 — July 2025

Sentiment analysis using pipecat and Cartesia voice api for live support calls.

### InterviewCoach

July 2025 — July 2025

Job search tool and interview prep using OpenAI realtime API.