

Alexey Voronin

AI Product Engineer (Fullstack • Audio • Data Systems)

Portfolio: *darrrgghh.space* (full projects, demos, and research)

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Summary

AI-focused fullstack engineer building production-ready systems that combine audio, data, and machine learning. Experienced in developing end-to-end platforms including annotation tools, data pipelines, and interactive web applications. Strong in AI-assisted development workflows, rapid prototyping, and shipping complete products independently.

Skills

Languages: Python, JavaScript/TypeScript, C++, C#, SQL

Frameworks: FastAPI, Next.js, React, Flask, JUCE

AI & Audio: Whisper, audio processing pipelines, FFT/STFT, data annotation systems

Tools: PostgreSQL, Vercel, Apache, Git, Linux, REST APIs, Web Audio API

Development: AI-assisted development (LLMs), rapid prototyping, fullstack system design

Projects

CyberCypher — AI-powered Audio Annotation Platform

- Built a fullstack system for transcription review with 30+ active users
- Designed token-based access system and user workflow for annotation tasks
- Implemented FastAPI backend with async PostgreSQL (JSONB for segment data)
- Developed Next.js frontend with real-time transcript editing and custom audio player
- Integrated Whisper-based transcription pipeline for audio processing
- Created admin dashboard for tracking progress, comments, and payout status

Spotify Popularity Analyzer — Data Visualization Tool

- Developed web application for analyzing artist popularity using Spotify API
- Built interactive dashboards with filtering, analytics, and export functionality
- Designed data pipelines for processing large discographies and track metadata

Audio Analyzer — Browser-based DSP Tool

- Built real-time audio analysis tool using Python (Pyodide) in the browser
- Implemented FFT, STFT, and loudness analysis with interactive visualization
- Designed system for processing audio directly in WebAssembly environment

Additional Projects

- Developed VST3 audio plugins using JUCE (DSP, UI, real-time audio processing)
- Built Arduino/ESP-based interactive devices (sensors, audio input, embedded systems)
- Created voice-controlled systems using Unity + ChucK (real-time audio interaction)

Experience

Graduate Research Assistant — Georgia Tech

USA

- Developed AI-driven systems for audio analysis and annotation workflows
- Built datasets and tools for large-scale audio processing and research applications
- Designed web-based interfaces for data collection and user interaction

Product / Project Intern — IGG (Game Development)

China

- Coordinated development processes between design, engineering, and production teams
- Assisted in feature planning, task tracking, and iteration cycles
- Contributed to communication workflows in an international game development environment

Education

Georgia Institute of Technology — M.S. Music Technology

Sichuan Normal University — M.Ed. Teaching Chinese as a Foreign Language

Nizhny Novgorod Conservatory — M.A. Sound Engineering

Languages

Russian (native), English (fluent), Mandarin Chinese (fluent)