Kate Jiang

New York, NY

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About Me

I'm a software engineer who thrives at the intersection of art and technology. I value craft, taste, and mastery. While away from the terminal, I love playing music with friends, building mechanical keyboards, and solving Rubik's Cubes of various shapes and sizes.

Education

Columbia University *New York, NY*

B.A. in Computer Science | GPA: 3.8 | Dean's List *May 2020*

- Courses: Computer Vision, Graphics, Systems in C, Applied Deep Learning, Natural Language Processing, Foundations of Entrepreneurship

Work Experience

Harmony Cloud *New York, NY*

Software Engineer *October 2024 - Present*

- Building music education tools with world class musicians.
- Rewrote a legacy Objective-C app in React Native + Expo.
- Developed novel generative algorithms modeling musical harmony as graphs.
- Migrated native modules with deep integration into iOS Core Audio (AUGraph, AVAudioEngine, MusicPlayer, etc.)
- Delivered sold-out concerts at the Apollo Theater with immersive music technology; featured on the cover of DownBeat Magazine.
- Presented at JEN (2025, 2026), Lincoln Center Jazz Congress (2024), and the Apollo's Intersection Festival (2023).

GLMX Technologies *New York, NY*

Software Engineer *September 2022 - October 2024*

- Built the leading trading platform in the repo/securities lending space from the ground up, supporting over $3 trillion in daily balances.
- As an early engineering hire, drove key technical initiatives including establishing the frontend testing infrastructure, migrating the build system from webpack to esbuild, and adopting Figma-based design workflow to streamline product collaboration.

Simple Fractal *New York, NY*

Software Engineer *September 2021 - September 2022*

- Automated scheduling workflows for over 10,000 monthly nursing shifts for a medium-sized healthcare client.
- Built a shift matching algorithm integrating nurse qualifications and availability, leveraging parallelized AWS Step Functions and Lambdas.
- Onboarded 2 new hires and guided them through an automation project from ideation to production.

Projects

2024 **Harmony Lab,** Staged two sold-out concerts for the world-famous Apollo Theater. Led a team of 5 engineers to create a novel live music experience leveraging a range of technologies including HuggingFace Transformers, Svelte/SvelteKit, Unreal Engine, and the OSC protocol. Collaborated with GRAMMY winning musician Stefon Harris.

2023 **Jazz Transformer,** Performed fine-tuning on a transformer trained on classical music (Huang et al., 2018) to generate authentic, nuanced jazz music. Compiled a jazz MIDI data set using an audio transcription model based on RNNs called Onsets and Frames (Hawthorne et al., 2018). Used PyTorch and HuggingFace Transformers.

2021 **Ray Tracer,** Renders photo-realistic 3D scenes with recursive ray tracing implemented in C++. Optimized ray intersection calculation using bounding volume hierarchies. Rendering capabilities include anti-aliasing, motion blur, diffuse shading, reflection, refraction, and defocus blur/depth of field.

2019 **Scriber,** React Native app that uses Google Natural Language API to provide real-time speech-to-text transcription for lecturers, tour guides, and other groups. Won first place at Horizons Summer Immersive Hackathon.

Skills

Tools React, React Native, Expo, Firebase, Svelte, Angular, Node.js, Vim, Git, tmux, SQL, Redis, AWS, Linux, PyTorch

Languages Typescript, Javascript, Objective C, C, C++, Go, Lua, Python, HTML/CSS