Kate Jiang

New York, NY, 10025

+1 (973) 738-0939 | katejiang@pm.me | github.com/kate-jiang

About Me

I'm a full-stack developer who is passionate about the intersection of art and technology. I care about craft, taste, and mastery. In my spare time, 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 for jazz improvisation and ear training, owning product design and direction.
- Rebuilt a legacy Objective-C app using React Native + Expo, completely redesigning the front end.
- Migrated core native modules that interface with iOS APIs such as AVAudioEngine and audio sessions.
- Maintained and iterated upon proprietary generative algorithms that model harmonic movements as graphs.
- Presented at the 2025 JEN Conference, the 2024 Lincoln Center Jazz Congress, and the 2023 Intersection Festival at the Apollo Theater.

GLMX Technologies *New York, NY*

Software Engineer *September 2022 - October 2024*

- Ground-up development of the leading trading platform in the repo/securities lending space with over $3 trillion in daily balances.
- As an early hire on the engineering team, participated in key architecture decisions and development initiatives such as spearheading frontend testing, migrating from webpack to esbuild, and adopting Figma to streamline collaboration with the product team.

Simple Fractal *New York, NY*

Software Engineer *September 2021 - September 2022*

- Automated workflows for over 10,000 monthly nursing shifts by building a scheduling service for a medium-sized healthcare client.
- Worked with cloud technologies including AWS Lambdas and practices like parallelized step functions. Iterated on a shift matching algorithm based on nurse qualifications and availability.
- 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