# 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