

# Kevin Jiang

New York, NY, 10025

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## About Me

I'm an engineer with experience bringing projects from planning to production and I'm deeply passionate about the intersection of design and artificial intelligence. Outside work, I love doing freelance photography and video editing, exploring the latest Music ML technologies, and playing music with friends.

## Projects

- Summer 2022     **C++ Ray Tracer**, Renders photo-realistic 3D scenes with recursive ray tracing implemented in C++. Optimized ray intersection calculation using bounding volume hierarchies, a logarithmic time search tree. Rendering capabilities include anti-aliasing, motion blur, diffuse shading, reflection, refraction, and defocus blur/depth of field.
- Spring 2020     **Jazz Transformer**, Attention-based neural networks to generate authentic, nuanced jazz music. Compiled a jazz MIDI data set using an audio transcription model based on RNNs. Performed transfer learning on a base transformer model (Cheng et al., 2018) trained on classical music. Used TensorFlow and Google Magenta.
- Summer 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.

## Education

### Columbia University

New York, NY

B.A. IN COMPUTER SCIENCE | GPA: 3.8

May 2020

- Coursework: Computer Vision, Computer Graphics, Systems in C, Applied Deep Learning, Natural Language Processing, Strategic Design

## Work Experience

### Simple Fractal

New York, NY

FULL-STACK SOFTWARE ENGINEER

September 2021 - Present

- Automated workflows for 10,000+ monthly nursing shifts by building a scheduling service for a healthcare client. Implemented using cloud technologies including AWS Lambdas and practices like parallelized step functions. Iterated on a shift matching algorithm based on nurse qualifications and availability.
- Contributed over 12 features across 2 separate teams. Technologies included NodeJS, React, Django, PostgreSQL, and various AWS services.
- On-boarded 2 new hires and guided them through a basic automation project that is now in production. Wrote scope of work documents and conducted discovery calls for this and various other features.

### Harmony Cloud

New York, NY

SOFTWARE ENGINEER

December 2020 - April 2021

- React Native app based on a novel algorithm that generates unpredictable yet compelling chord progressions following the rules of Western music theory.
- Worked with GRAMMY-nominated musician Stefon Harris to prototype and implement educational use cases for the algorithm.

### Columbia Photography Association

New York, NY

PRESIDENT

December 2015 - December 2018

- Expanded our clientele to include notable organizations like the United Nations and Lincoln Center. Maintained relations with regulars across NYC.
- Coordinated over 150 photography contracts per semester, oversaw 7 board members and dozens of student photographers.
- Built a full stack web application to automate our job-handling and book-keeping workflows (MERN stack).

### Bank of New York Mellon

New York, NY

PRODUCT DESIGN INTERN

June 2018 - August 2018

- Prototyped a data visualization tool with Microsoft HoloLens, demonstrating tangible business applications of augmented reality.
- Wireframed dashboards for a big data product (Asset Strategy View) generating market intelligence across multiple business lines.

## Skills

**Tools**     NodeJS, Django, AWS, SQL, React, Redux, Puppeteer, UNIX, Git/Github, TensorFlow, Keras, OpenCV

**Languages**     Python, JavaScript, C, C++, Java, HTML/CSS