

# VINCENT JIANG

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## EDUCATION

### Cornell University — Bachelor of Science in Computer Science

Ithaca, NY | Expected: May 2025

- GPA: 3.9
- Relevant Coursework: Operating Systems, Functional Programming, Databases, Backend Development, Web Development, Systems Programming, Systems Engineering, Machine Learning, Algorithms, Object-Oriented Programming and Data Structures

## EXPERIENCE

### Software Engineer Intern — Roblox

San Mateo, CA | May 2023 — August 2023

- Contributed to Roblox Studio and leveraged C++ to improve average plugin load time by over 10% through concurrent programming using fibers and avoiding unnecessary loads
- Developed robust plugin capabilities infrastructure for storing plugin metadata and user permissions in a manifest file, allowing for versatile plugin behavior and usage by Roblox game developers
- Streamlined user-plugin interaction using UIs created with Qt and Lua, and enabled CRUD operations on user plugin permissions

### Software Engineer Intern — Yoomi

Ithaca, NY | Aug 2022 — Present

- Refactor and develop code in TypeScript responsible for motion-tracking behavior, rendering logic, and animations on HTML5 Canvas to provide an interactive experience for in-patients in physical therapy during exercise
- Design robust test suites using Jest to ensure drawing from interpreted on-screen objects from camera (OpenCV) are accurate, efficient, and scalable to new types of animations and user movements

### Software Engineer — Cornell Cup Robotics

Ithaca, NY | Feb 2022 — May 2023

- Reduce user speech-to-text translation errors by 12% through machine learning and NLP as part of CS Chatbot team
- Integrate facial recognition features and commands into the Chatbot user interface, ensure program correctness through regression and unit testing, and implement APIs to fetch user data upon speech input

### Tutor and Course Consultant — Cornell University

Ithaca, NY | Jan 2022 — Jan 2023

- Fostered collaborative environments and learning experiences for students in Object-Oriented Programming and Multivariable Calculus as part of the Engineering Learning Initiatives (ELI) program at Cornell Engineering
- Facilitated discussions and enhanced student understanding of programming and software development tools (Git, IntelliJ)

## PROJECTS

### Portfolio — JavaScript, HTML/CSS, jQuery

#### Invited — Python, Flask, SQLAlchemy, SQLite, Docker, Marshmallow

Apr 2023 — May 2023

- Developed backend app with Python/Flask as part of Cornell AppDev hackathon (awarded Best Backend out of 15+ teams)
- Implemented RESTful API, enabling user registration, authentication, authorization, and CRUD operations on users and events
- Leveraged SQLAlchemy ORM to handle data persistence, design database schemas, and establish model relationships, along with Marshmallow for input validation and serialization to ensure data integrity and consistent API responses

#### Towers of Hanoi — JavaScript, HTML/CSS, React.js, Three.js, Firebase

Jul 2022 — Aug 2022

- Web application and game based on the Towers of Hanoi math puzzle, where users follow a set of rules to move disks to towers
- Designed and programmed responsive UI, interactive component behavior, and 3D animations and rendering through React.js, react-three/fiber, use-gesture, and react-spring
- Employed OAuth 2.0 authentication and added database to store and fetch user game data using Cloud Firestore

#### Terrain Map — Java, Swing, AWT

Jun 2022 — Jul 2022

- 3D visualization tool for popular stochastic algorithms for fractal landscape generation that model Brownian motion: Midpoint Displacement, Diamond Square, and Perlin Noise

## ACCOMPLISHMENTS

### 4x Cornell Engineering Dean's List Recipient

Aug 2021 — Present

### 2x American Invitational Mathematics Examination (AIME) Qualifier

Feb 2020 — Feb 2021

- Scored in the top 5% for the American Mathematics Competitions (AMC 12) out of 20,000+ examinees

## SKILLS

**Programming Languages:** Java, Python, C, C++, JavaScript, TypeScript, SQL, HTML/CSS, OCaml, Lua

**Technologies and Frameworks:** React, Git, jQuery, Node.js, Flask, Docker, Postman, Django, Firebase