VINCENT JIANG

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EDUCATION

Cornell University — *Bachelor of Science in Computer Science*   Ithaca, NY | Expected: May 2025
- GPA: 3.8
- Relevant Coursework: Operating Systems, Functional Programming (OCaml), Databases, Backend Development (Python), Web Development (TypeScript), Systems Programming (C), Systems Engineering Project (Python), Machine Learning (Python), Algorithms, Object-Oriented Programming & Data Structures (Java)

SKILLS

Programming Languages: Java, Python, C, C++, JavaScript, TypeScript, HTML/CSS, SQL, OCaml, Lua
Technologies and Frameworks: Git, React, jQuery, Jest, Node.js, Flask, Docker, Boost

EXPERIENCE

Software Engineer Intern — *Roblox*   San Mateo, CA | May 2023 — August 2023
- Contributed to Roblox Studio and leveraged C++ to improve plugin load time by over 15% through concurrent programming using fibers and avoiding unnecessary plugin loads
- Developed robust plugin capabilities infrastructure for adding and fetching plugin metadata stored in a manifest file, allowing for flexible plugin behavior and smoother plugin interaction for Roblox game developers creating through Studio
- Streamlined user-plugin interaction through UIs developed with Qt and Lua while enabling CRUD operations on user plugin data stored on the cloud to handle data persistence across user sessions and machines

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 the CS Chatbot team
- Integrate facial recognition features and commands into the C1C0 Chatbot user interface, ensure program correctness through regression and unit testing, and implement APIs to fetch data upon user speech input

Tutor and Course Consultant — *Cornell University*   Ithaca, NY | Jan 2022 — Jan 2023
- Fostered collaborative environments and engaging 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 application with Python as part of the 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, including 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% of examinees for the American Mathematics Competitions (AMC 12) out of 20,000+ examinees