

## EDUCATION

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

Ithaca, NY | Expected: May 2025

GPA: 4.06

- Honors: Dean's List (2022-2023: Spring, Fall)

### Relevant Coursework

- Completed: Object-Oriented Programming & Data Structures, Discrete Structures, Computer System Organization and Programming, Trends in Web Development, Linear Algebra
- Fall: Functional Programming, Systems Engineering Project
- Spring: Algorithms, Introduction to Machine Learning

**Stuyvesant High School** — *High School Diploma*

New York, NY | Sep 2018 – June 2021

GPA: 96.8

- Honors: 2x American Invitational Mathematics Examination (AIME) Qualifier, High Honors in Computer Science, Mu Alpha Theta Honor Society
- Extracurriculars: Competitive Programming, Math Team

## EXPERIENCE

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**Software Engineer** — *Cornell Cup Robotics*

Ithaca, NY | Feb 2022 – Present

- Translate user speech inputs to text using machine learning and natural language processing as part of the CS Chatbot team for the C1C0 (an R2-D2-inspired robot) project
- Reduce user speech-to-text translation errors by 22% by implementing algorithms using Python, including Levenshtein distance
- Demonstrate excellent problem-solving and communication skills when collaborating with peers to program and test software

**Tutor and Teaching Consultant** — *Engineering Learning Initiatives, Cornell Bowers CIS*

Ithaca, NY | Jan 2022 – Present

- Foster collaborative environments for student engagement as part of the ELI Tutoring program at Cornell Engineering
- Lead and instruct peers in object-oriented programming, data structures, and multivariable calculus

**Resident Advisor** — *Cornell University*

Ithaca, NY | Aug 2022 – Present

- Lead and inform first-year residents at Clara Dickson Hall on campus events, house rules, and community involvement
- Work and collaborate with the Dickson residential staff team to ensure resident safety, inclusion, and wellbeing

## PROJECTS

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

July 2022 – Aug 2022

- Web app and game based on the Towers of Hanoi math puzzle
- Designed and programmed responsive UI, dynamic component behavior, and 3D animations 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 Firebase
- Implemented heuristic algorithms to optimize solution animations to different puzzle variations and constraints

**Terrain Map** — *Java, Swing, AWT*

June 2022 – July 2022

- 3D visualization tool for popular stochastic algorithms for fractal landscape generation that model Brownian motion, including Midpoint Displacement, Diamond Square, and Perlin Noise
- Developed GUI and implemented custom display features supported by StdDraw, a simple 2D graphics library

**Choice Game** — *C, ImageMagick*

Jan 2021 – Feb 2021

- A choice-based game run on the terminal that relies on user command-line inputs
- Led a three-member team in project design and coding process using systems programming concepts: files, memory, threads, processes, and data structures

## SKILLS

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### Computer

- Languages and Technologies: Java, C, Python, JavaScript, HTML, CSS, Git, jQuery, React.js, Firebase
- Knowledge and implementation of software design patterns, object-oriented programming, functional programming, data structures, algorithms, and debugging, testing, and problem-solving strategies in programming

### Languages

- Native in English and Chinese