

# Stanley Jiang

908-727-2784 · sj466@cornell.edu · US Citizen · [www.linkedin.com/in/stanley-jiang](https://www.linkedin.com/in/stanley-jiang) · [stanleyjiang25.github.io](https://stanleyjiang25.github.io)

## Education

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### Cornell University

August 2021 – May 2024 (Expected)

- Computer Science Major, 3.979/4.00 GPA
- Courses: Object-Oriented Design and Data Structures - Honors (FA21), Data Structures and Functional Programming (SP22), Discrete Structures (SP22)

### Ridge High School

September 2017 – June 2021

- 4.86/4.00 GPA, SAT: 1590

## Experience

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### Alphademic Learning, Teacher and Marketing Team Member

May 2020 – September 2020

- Taught the basics of Java to over 20 students following a self-created rigorous 12-week lesson plan.
- Helped raise donations to support medical workers with supplies during the COVID pandemic.

### Gauss STEM Camp, Teacher

July 2019 – August 2019

- Worked as a camp counselor and teacher for a 3-week summer program.
- Helped students grasp introductory coding concepts.

## Projects

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### Simulating Evolving Artificial Life

- Created a simulation of a simple world of critters that interact with each other and the surrounding terrain and evolve through mutations to the code responsible for their behavior.
- Built a graphical front end using JavaFX.
- Implemented a fully functional programming language by creating a parser and interpreter with Java.
- Used Dijkstra's algorithm to give critters the ability to search for food.

### Text Editor

- Implemented autocomplete, spell checking, and search functions in a text editor.
- Achieved through the creation and use of hash tables, tries (prefix trees), and bloom filters.
- Averaged 0.08 ms per word spell check against a 118,000 word dictionary.

### RSA Encryption

- Created a system that encrypted messages through RSA using randomly generated public and private keys and decrypted messages given public and private keys.

## Activities

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### Cornell Science Olympiad, Chemistry Lab Event Supervisor

September 2021 – Present

- Wrote test questions for the Chemistry Lab Event for Cornell's 2022 Science Olympiad Satellite Invitational.
- Helped quality control the Detector Building Event test.

### Math Talk on Bézier Curves, [stanleyjiang25.github.io/BezierCurves.pdf](https://stanleyjiang25.github.io/BezierCurves.pdf)

May 2021 – August 2021

- Explored the mathematical modeling capabilities of Bézier curves on polynomial functions.
- Proved the existence of an exact representation of any interval of any polynomial curve through a recursive construction of control points of a Bézier curve.

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**Programming Languages and Frameworks:** Java, C++, HTML/CSS,  $\text{\LaTeX}$ , JavaFX

**Languages:** English (native speaker), Mandarin Chinese (fluent), Spanish (working proficiency)

**Affiliations:** Cornell Undergraduate Math Club, Mu Alpha Theta, Lehigh Valley Math Team, Ross Mathematics Program, Awesome Math Summer Program

**Awards:** National Merit Scholarship Finalist and National Merit Bristol-Myers Squibb Co. Scholarship Recipient, Mu Alpha Theta High School Scholarship Recipient, 6x AIME Qualifier, 2x Princeton University Mathematics Competition Individual Finalist, Harvard-MIT Math Tournament 3rd place team

**Interests:** Tetris, piano, drawing, clarinet, and overused jokes