

# Justin Sun

jwsun@andrew.cmu.edu ❖ (408) 515-5115 ❖ Saratoga, CA

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## EDUCATION

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### Carnegie Mellon University

Aug. 2019 – expected May 2023

*BS, Double Major: Mathematical Sciences and Computer Science*

- Honors Math Program, GPA: 4.0/4.0
- Putnam Top 500 (rank 227)
- Coursework: Math Studies Algebra, Math Studies Analysis, Probability, Great Ideas in Theoretical Computer Science, Functional Programming, Parallel and Sequential Data Structures and Algorithms, Quantum Computation
- Math Club, CMIMC Software Team, Origami Club, Poker Club, Badminton Club

### Saratoga High School

Aug. 2015 – Jun. 2019

- GPA: 4.43, Graduated Very High Honors, National Merit Finalist
- USA Computing Olympiad Platinum Division
- AIME 4x Qualifier, High Score of 10; AMC 10/12 Distinguished Honor Roll

## EXPERIENCE

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### Facebook Inc.

May 2021 – Aug. 2021

*Incoming Software Engineering Intern*

### Carnegie Mellon Research topics in Discrete Mathematics

May 2020 – Aug. 2020

*Research Assistant*

- Worked with professor Kaave Hosseini in Theoretical Computer Science and Additive Combinatorics.
- Developed and proved several conjectures on the NP-hardness of various decision problems relating to Cayley Graphs, Boolean satisfiability, sum sets, and integer polynomials.
- Utilized software like C++ and MATLAB to develop various approximation algorithms and solve integer programming problems to gain computational insight.

### Ross Mathematics Program

Jun. 2020 – Aug. 2020

*Counselor (2019, 2020), Junior Counselor (2018), First-Year Student (2017)*

- Mentored group of five high school students through a condensed college level Number Theory course.
- Took advanced courses in Analytic Number Theory, Complex Analysis, Ergodic Theory, and Abstract Algebra.

### Toga Junior Math Club

Aug. 2015 – Jun. 2019

*Head Liaison*

- Led math outreach program to teach mathematics to students from Redwood Middle School.
- Coached Redwood Middle School MathCounts team to 1st place in the state of California.
- Designed team management software in C++ to log key information like volunteer hours and progress reports for coaches and students using their school ID cards.
- Led communications among a network of 300+ coaches, students, and parents through mail merge program.
- Managed an independently raised budget of \$25,000+.
- Founded and directed the first ever South Santa Clara Valley MathCounts chapter competition.

## SKILLS AND OTHER INTERESTS

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- **Skills:** Java, C++, Python, Standard Machine Language, LaTeX, Mandarin, Spanish
- **Interests:** Cardistry; Cycling; Poker; Cinematography; Cooking