

Jyotsna Rao

14618 Settlers Landing Way – North Potomac, MD – 20878

☎ 240-291-5232 • ✉ jrao@caltech.edu

Education

California Institute of Technology (Caltech)

B.S. Computer Science

Pasadena, CA

Expected June 2022

Montgomery Blair High School

Math, Science, and Computer Science Magnet Program; ACT: 36/36

Silver Spring, MD

May 2018

Relevant Coursework

- **Caltech** — CS 2: *Introduction to Programming Methods*, CS 21: *Decidability and Tractability*, Ma/CS 6a: *Introduction to Discrete Mathematics*, Math 1: *Calculus of One and Several Variables and Linear Algebra*
- **Future Coursework** (Spring 2019) — CS 38: *Algorithms*, CS 11: *Computer Language Workshop in C*
- **Montgomery Blair High School** — *Algorithms and Data Structures, Artificial Intelligence, Analysis of Algorithms, Applied Statistics*

Skills

- Languages and software including Python, Numpy, Java, LISP, and \LaTeX .
- Experience with object oriented programming, algorithms, and data structures.

Experience

Projects including a graphical N-body simulator, sound synthesizer, Sudoku solver, logic puzzle solver, 2048 game remake, and Asteroids game remake.

Work Experience

National Institute of Standards and Technology

Research Intern

Gaithersburg, MD

Summer 2017

Wrote scripts using Python and Numpy to analyze X-ray reflectometry data and study magnetization in doped topological insulators under the guidance of Dr. Alexander Grutter.

AoPS Academy

Teaching Assistant, Grader

Gaithersburg, MD

Summer 2018

Worked as a teaching assistant for intermediate and advanced math classes, including courses in Algebra, Geometry, Number Theory, and Combinatorics.

Activities

Leadership

Montgomery Blair Math Team

Captain

2017-2018

Wrote and delivered lectures on advanced topics in mathematics; helped design and organize a math tournament for local middle school students.

Achievements

- University of Maryland Chemathon Competition, 1st place team (2017)
- Montgomery County Public Forum Debate, 2nd place pair (2017)
- Princeton University Mathematics Competition, 3rd place team (2017)

Volunteer Work

- Tutoring underprivileged middle and high school students in math and science. (2018-present)
- Worked with a cultural organization to teach Sanskrit to children. (2016-2018)