

# Gavi Dhariwal

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## EDUCATION

### University of Redlands

Bachelor of Science: Mathematics | Bachelor of Arts: Computer Science

Redlands, CA

Expected Aug 2022

**Relevant Coursework:** Complex Analysis, Real Analysis, Probability, Number Theory, Linear Algebra, Differential Equations, Conjecture and Proof in Discrete Mathematics, Vector Calculus, Introduction to Machine Learning, Software Engineering, Theory of Algorithms, Game Programming, Web Application Development

**Languages:** Fluent in *English* and *Hindi*

### Dean's List

Honor given to students who have earned a semester GPA of 3.65 or higher

Fall 2018 – Fall 2020

### Budapest Semesters in Mathematics

**Coursework:** Introduction to Abstract Algebra, Graph Theory, Combinatorics, Mathematical Problem Solving, Non-Euclidean Geometry

Budapest, Hungary

Fall 2021, Summer 2022

## TECHNICAL SKILLS

Java, Python, Sage, JavaScript,  $\text{\LaTeX}$ , HTML/CSS (skill level: *Intermediate*)

ThreeJS, Manim (skill level: *Beginner*)

## WORK EXPERIENCE

### Research Assistant

Department of Mathematics - University of Redlands

Redlands, CA

Jun 2021 – Aug 2021

- Independently studied the basic aspects of Matroid Theory
- Studied Affine Geometry as background material. Worked with research advisor to understand questions on Bases and Probability in Affine and Projective spaces
- Presented a poster on my study of Matroid Theory to students and faculty of the STEM departments

### Research Assistant

Department of Mathematics - University of Redlands

Redlands, CA

Jun 2020 – Aug 2020

- Studied the Ranked Choice Voting system, where it's being adopted and where it's receiving resistance
- Researched on the property of Monotonicity and it's relationship with Ranked Choice Voting. Took conditions for Monotonicity failure for 3-candidate elections and applied them to real world data
- Presented a poster on my study of Ranked Choice Voting to students and faculty of the STEM departments

### Tutor (CRLA Certified) and Grader

Department of Mathematics - University of Redlands

Redlands, CA

Aug 2019 – Apr 2022

- Bolstered confidence in peers towards Math classes by helping them in conceptual understanding and homework problems in Calculus
- Graded homework sets (class size ranging from 12 to 30) for Calculus, Linear Algebra and Abstract Algebra, and gave constructive feedback for the same

## TALKS

### RED Talk: Math...it ain't that bad

Glenn Walichs Theatre - University of Redlands

Redlands, CA

Feb 2022

Selected out of 50 speaker-applicants, as part of the inauguration of the university's new President, to give a talk on the relationship that people usually have with Mathematics. In preparation for this talk, I self-taught myself Manim to design and program animations for the audience. By sharing my own experiences with Mathematics and concepts I find beautiful in Math, I motivated the audience to rethink their outlook on Mathematics.

## ACADEMIC HONORS & AWARDS

### Tutor of the Year

Each year this award is given to a tutor who has demonstrated outstanding enthusiasm, reliability, a positive attitude, professionalism, and commitment to their job, as well as dedication in tutoring specific subject matter within the tutoring program. The tutor is selected based on their nominations from other tutors and students, evaluations from students, the number of tutoring sessions completed, and overall performance during the year.

Apr 2022

### Mortar Board - $\Pi\Sigma\Lambda$

Mortar Board is a national honor society that recognizes college seniors for their achievements in scholarship, leadership and service, provides opportunities for continued leadership development, promotes service to colleges and universities and encourages lifelong contributions to the global community. *Inducted: August 2021*

Aug 2021

### Pi Mu Epsilon - $\Pi\text{ME}$

Pi Mu Epsilon is the U.S. honorary national Mathematics society which is dedicated to the promotion of mathematics and recognition of students who successfully pursue mathematical understanding. *Inducted: April 2020*

Apr 2020

LEADERSHIP  
ACTIVITIES

**Omicron Delta Kappa - OΔK**

Apr 2020

Omicron Delta Kappa, the National Leadership Honor Society, recognizes and encourages superior leadership and exemplary character. Since 1914, ODK invites only 5% of the top 35% students in a particular class to join and provide opportunities to expand leadership skills. *Inducted: April 2020*

**Maroon and Grey Student Ambassadors**

Redlands, CA

*New Member Chair & Member*

Apr 2020 – Apr 2022

- Worked with senior leadership of the university to support the goals of the Advancement Division of the university by spearheading efforts towards developing relationships with the rare population of international and Math major alumni
- Strategized the application and interview process, and problem solved with the MGSA advisor to improve general practices for an inclusive and friendly environment amongst members

**Pi Mu Epsilon**

Redlands, CA

*Co-President*

Jan 2021 – Apr 2022

- Re-cultivated an environment of enthusiasm in the organization (after being slowed down by the COVID-19 pandemic) by fostering a healthy and active space in the cabinet, and organizing new events centered around the needs of the members
- Built outreach by bringing in a diverse range of speakers (industry talks, grad panels, study abroad program information sessions) to help members gain exposure in Mathematics outside of Redlands

**Alpha Phi Omega - AΦΩ: ΣB Chapter**

Redlands, CA

*Member*

Jan 2020 – Apr 2022

- Bolstered the principles of the service fraternity - leadership, friendship and service - by completing service hours across the campus community
- Participated in general body meetings to further the goal of the organization and increase outreach across the campus community

**Outdoor Programs**

Redlands, CA

*Trip Leader*

Sep 2019 – Apr 2022

- Planned and lead hiking/backpacking trips in the outdoors. Motivated participants on the trip to develop a unique connection with their surrounding environment by engaging in reflective activities
- Facilitated activities such as cooking in the backcountry, setting up tents and following LNT (Leave No Trace) principles. Managed injuries on trips, if any, by following WFR protocol (Wilderness First Responder)
- Provided students on campus, especially minorities like international students, avenues to explore the outdoors

**The Denominators (Math Club)**

Redlands, CA

*President*

Apr 2019 – Apr 2021

- Brainstormed ideas for club events to foster a friendly Math community outside of the classroom. This established an environment of camaraderie, teamwork and fun - some key qualities of a healthy and collaborative Mathematics department
- Facilitated cabinet meetings to work towards a healthy environment and addressed any internal conflicts. Managed expectations for the organization and helped cabinet members succeed in their responsibilities by being as approachable and understanding as possible

**Redlands International Students Association**

Redlands, CA

*Founder & Vice President*

Oct 2018 – Dec 2020

- Co-founded the club to develop a safe space for International students to discuss shared experiences of being foreigners in the United States
- Documented paperwork and meeting notes from cabinet meetings. Kept track of cabinet member responsibilities to further the goal of the club
- Brought awareness about the international community on campus by celebrating cultures and festivals of fellow international students

**Office of International Students and Scholars**

Redlands, CA

*Global Ambassador*

Aug 2019

- Assisted in developing and carrying out the International Student Orientation program
- Served as a mentor to newly admitted international students during the International Student Orientation and throughout the Fall semester

**TEDxUniversityofRedlands***Curation Team Member*

Redlands, CA

Jan 2019 – Mar 2019

- Assisted in planning and executing the universitys first ever TEDx event
- Reached to potential speakers and collaborated with them on curating their talks
- Assisted in on-stage prep on the day of