# Gavi Dhariwal

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EDUCATION

#### **University of Redlands**

Redlands, CA

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

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

Honors and Awards: Mortar Board -  $\Pi\Sigma A$ , Math Honors Society -  $\Pi ME$ , National Leadership Honors Society -  $O\Delta K$ ,

**Tutor of the Year** (2021-22)

Dean's List Fall 2018 – Fall 2020

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

### **Budapest Semesters in Mathematics**

Budapest, Hungary

Coursework: Introduction to Abstract Algebra, Real Functions and Measures (audit),

Fall 2021, Summer 2022

Mathematical Problem Solving, Non-Euclidean Geometry

TECHNICAL SKILLS Java, Python, Sage, JavaScript, LATEX, HTML/CSS (skill level: Intermediate)

Three.JS, Manim (skill level: Beginner)

Work Experience

#### **Research Assistant**

Redlands, CA

Department of Mathematics - University of Redlands

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 Redlands, CA

Department of Mathematics - University of Redlands

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**

Redlands, CA

Department of Mathematics - University of Redlands

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.

RED Talk: Math...why hate it?

Redlands, CA

Glenn Walichs Theatre - University of Redlands

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. By sharing my own experiences with Mathematics and concepts I find beautiful in Math, I motivated the audience to rethink their outlook on Mathematics.

CAMPUS ACTIVITIES

**TALKS** 

# **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 EpsilonRedlands, CACo-PresidentJan 2021 – Apr 2022

- Re-cultivated an environment of enthusiasm in the organization (after being slowed down by the 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.

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