

Roshan Bellary

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EDUCATION

Valley Christian High School – San Jose, CA

2019 – 2023

Unweighted GPA: 4.0 | Weighted: 4.83 GPA | SAT: 1570/1600 | SAT Math II - 800 | PSAT: 1490/1520

STANDARDIZED TESTS

SAT 10/28/2021 Total: 1570/1600 Reading and Writing: 770/800 Math: 800/800.

SAT MATH 2 Subject Test 11/02/2019 Total Score: 800/800

PSAT NMQST 10/13/2021 Total Score: 1490/1520 Reading and Writing: 730/760 Math: 760/760 (Qualified for consideration for National Merit Scholarship in 2023)

AP Tests: AP Physics C: Electricity and Magnetism: 5, AP Physics C: Mechanics: 5, AP Statistics 5, AP Computer Science A: 5, AP Calculus BC: 5, AP Biology: 5, AP Chemistry: 5, AP English Language and Composition: 5, AP Physics 1: 4, AP US History: 4, AP Spanish Language and Culture: 3.

AWARDS, PLACEMENTS AND RECOGNITIONS

Management & Technology Summer Institute(M&TSI), University of Pennsylvania 2022: Best Project overall

USA Computing Gold Olympiad December 2021: Achieved Gold Ranking.

USA Physics Olympiad Bronze March 2022: Placed in the top 100 and achieved a Bronze Medal.

American Society for Gravitational and Space Research (ASGSR) 2021 Achieved 2nd place with team for Best High School Presentation

Math League Nationals 2022 - Ranked 13th Nationally among 11th Graders

Math League States(California) 2022 - Ranked 8th in Northern California among 11th Graders

USA Physics Olympiad F=MA exam March 2022: Qualified for the Invitational USAPhO Exam (Among Top 400 students nationwide) in the F=MA exam conducted by American Association of Physics Teachers (AAPT).

USA Math Olympiad: Placed in the top 2.5% in the USA in the last three years in AMC12/AMC10 qualifying for American Invitational Mathematics Examination(AIME).

CodeForces: Specialist Ranking.

College Board July 2021 AP Scholar with Distinction Award.

Math League Nationals 2021 - Ranked 9th Nationally among 10th Graders

Math League States(California) 2021 - Ranked 3rd in Northern California among 10th Graders and 9th overall.

Math League 2020 – Was part of a team that advanced to the national level and placed first among school teams overall in the national competition.

Caroline Bradley High School Scholarship 2019 Finalist

EXPERIENCE/PROGRAMS

Management & Technology Summer Institute(M&TSI), University of Pennsylvania

July 2022 - July 2022

- Learned through classes taught by leading Penn faculty and successful entrepreneurs; Achieved an A grade in the class
- Worked on intensive team prototyping project and activities designed to teach students the principles of technological innovation
- Won best overall award with my team for our final project[[Promo Video](#)] that is still being worked on post-program
- For project, built a bag attachment which reminds the user about forgotten belongings, called TagBag

VC Assist Web & Mobile App , Frontend Developer

Dec 2021 – Present

VC Assist is a web and mobile app developed by students for students to manage their courses via both a mobile and web interface

- Worked on features such as customized homepage, assignment list, grade calculator on web and mobile apps
- Built user base to 1200+ students

Quantum Cryptography School for Young Students (QCSYS), University of Waterloo, Canada

Aug 2021 – Aug 2021

Unique two week summer program for high school students that combined mathematics, physics, computer science, and engineering concepts to teach one of the most exciting topics in modern science – quantum information

- Topics covered included: quantum entanglement, quantum cryptography, quantum algorithms and linear algebra

Data Science Academy, Wharton School, University of Pennsylvania

Jul 2021 – Jul 2021

- Learned essential data science techniques such as data visualization and data wrangling
- Developed a working proficiency with R and worked on project to predict wildfires using a 24 year geo-referenced Kaggle data set

Future of the Business World, Wharton School, University of Pennsylvania*Jun 2021 – Jun 2021*

- Engaged with peers and instructors to express personal points of view about the changing business landscape
- Collaborated on a group project to present predictions about the future of the business world

Mathily Math Camp*Jul 2020 – Aug 2020*

- Five week-long highly selective rigorous math summer camp for high schoolers
- Three weeks of core curriculum consisted of linear and affine algebra, geometry, combinatorics, graph theory and number theory
- Two weeks of specialization in color theory, finite-state automata, and complex analysis using MATLAB software

Honors High School Math Camp, Texas State University, San Marcos, TX*Jul 2019 – Aug 2019*

- One of three 8th graders chosen for this five week-long rigorous math camp for 9th – 12th Grader
- Taught mathematical proof writing along with advanced Number Theory including quadratic residues, Diophantine equations and Euclidean algorithm
- Learned Mathematica software to model real world problems in coding theory, cryptography and prime-testing

EXTRACURRICULAR ACTIVITIES

International Space Station (ISS) Program, Research Lead, Project Lead, Deputy Project Lead, Software Lead *Aug 2019 – Present*

After school program for students to design and send microgravity experiments to International Space Station (ISS)

- Research Lead(2022), Organizing research for 8 teams(64 students) by editing research papers and sending papers to journals
- Project Lead(2022), Leading research project on the piezoelectric effects of crystals grown in microgravity environments
- Project Lead(2021), Led an experiment on the efficacy of a S. Oneidensis Biofilm Microbial Fuel Cell; research is being published
- Deputy Lead(2020), Helped lead an experiment on the efficacy of ferrofluid heat and energy transfer
- Software Lead(2019), Lead software development for an experiment on effects of microgravity on brine shrimp growth

DECA Business Club, Software and Operations Officer*Aug 2020 – Present*

- Operations Officer
 - Part of six person operations team dealing with registration and logistics for competitions
 - Developed a curriculum for finance which is used to teach first year students to prepare them for competitions
- Software Officer
 - Led a team of three responsible for the maintenance and enhancement of the web and mobile app MyDECA
 - Built an attendance logging feature for events which helped generate contact reports during COVID

USAPhO (Physics) Club, Valley Christian High School Founder & Club officer (Secretary)*Aug 2020 – Present*

- Responsible for creating practice problem sets for the F=MA Exam.

Competitive Programming Club, Valley Christian High School Co-Founder & President*Aug 2020 – Present*

- Responsible for tutoring students in advanced programming concepts in Competitive Programming to help them in competitions such as USACO, Codeforces and AtCoder.
- Registered members for important CS competitions such as the American Computer Science League

VOLUNTEERING

Westgate Church, Saratoga, CA*Sep 2019 – Present*

- Volunteer for respite event for parents of children with special needs
- Organized fun activities for kids to help them have fun over the course of a day

Community Outreach Program, Valley Christian School, San Jose CA*Aug 2021 – Aug 2022*

- Led a three member team that taught programming and robotics to 4th-6th Graders at Hellyer Elementary and Ramblewood Elementary
- Personally developed curriculum for robotics software and manipulators (accessories used with the Lego Mindstorm EV3 Robot)
- Taught over 120 students

Student Corps (<https://studentcorps.org/tutoring/>)*Jun 2020 – Present*

- Coached elementary and middle schoolers every week for an hour for the AMC 8 Math Competition
- Taught over 20+ students
- Firmly believe in Student Corps' motto of equal opportunity for education without barriers

SKILLS AND INTERESTS

Languages : English (proficient), Spanish (intermediate, AP level)

Interests: Badminton, Table Tennis, Cooking, 3d Printing

Technical: Java, Python, C++, Javascript - Nodejs & Reactjs, Flutter, Redux, Firebase, R, HTML 5, CSS, Mathematica, MATLAB, LaTeX, MS Office - Word, Excel & PowerPoint