

DHRUVA CHEETHIRALA

CLASS OF 2025 | #:408-802-6656 | DHRUVA0802@GMAIL.COM

EDUCATION

EVERGREEN VALLEY HIGH SCHOOL

San Jose, CA

GPA: 4.0 (UW), 4.52 (W)

AP Scholar with Distinction:

Calculus BC (5), Physics 1 (5), World History (5), Statistics (5), Human Geography (5), Literature (5), Physics C: Mech (5), US History (5), CS Principles (5), CompSci A (5), Microeconomics (5)

Additional Coursework:

- Multivariable Calculus (A) (Dual Enrollment)
- Linear Algebra (A) (DE)
- Coursera: "Mathematics for Machine Learning and Data Science Specialization" (June - September 2024)
- Udemy: "2022 Complete Python Bootcamp From Zero to Hero in Python" (February - April 2022)

TECHNICAL SKILLS

- **Languages:** Python, C++, Java, SQL, R, Javascript
- **Proficient Python Libraries:** NumPy, PyTorch, Pandas

AWARDS

- **National High School Journal of Science Publication (2024)**
 - Completed research paper on protein function prediction & published after peer editing rounds.
- **AIME Qualifier (2023)**
 - Scored highly on AMC 12 Examination
 - Top 5% Internationally
- **San Jose City Hall Commendation, David Cortese Senator Award (2024)**
 - Completed Eagle Scout Project.
- **Triple Octofinalist, 2023 Cal Berkeley Invitational**
 - Top 64 out of 194 international Public Forum Entries.
- **Gold Presidential Volunteer Service Award (2023)**

RESEARCH EXPERIENCE

Analyzing the Impact of Climate Change on Heat-Shock Protein Function with Machine Learning

June 2024 - Present

- Worked with SUNY Binghamton Ph.D. student Darrell Robinson to analyze the impact of extended heat exposure on heat-shock proteins.
- Attributed changes in functionality to the cells containing Heat-Shock proteins.
- Pending Publication at Cornell arXiv.

Protein Function Prediction with Artificial Intelligence

Sept 2023 - Sept 2024

- Worked with Oxford Ph.D. student Lars Holdjik to analyze the feasibility of machine learning methods to predict protein function based on primary structure.
- Predicted with ~70% accuracy.
- Published in National High School Journal of Science.

Technological & Policy Solutions to the US Data Privacy Crisis

March - August 2022

- Worked with Georgia Tech Professor Maria Konte on social media policy and data privacy.
- Recommended policy solutions such as implementing the EU's GDPR legislation in the US.
- Explored technological solutions such as differential privacy.

EXTRACURRICULAR ACTIVITIES

Boy Scouts, Troop 264, Assistant Senior Patrol Leader

January 2019 - Present

- Boy Scout since 6th grade.
- Patrol Leader for 20 younger scouts, ages 11 - 15, to assist them in activities to rank up and earn badges.
- Served as Assistant Senior Patrol Leader (ASPL), leader of 90+ scouts on camping trips and meetings.

Debate Captain, Public Forum Competitor, Varsity EVSD

August 2019 - Present

- Researched, analyzed, and prepared debate arguments on cryptocurrency regulation, U.S. Drug and Healthcare Policy, foreign relations in East Asia and Europe, and many more.
- Triple Octofinalist in Varsity Public Forum @ Berkeley Debate Tournament (2023).
- Average 4 - 12+ hours per week depending on the training and tournament season.

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SCHOOL CLUBS

Secretary, Math Club

August 2021 - Present

- Active Member contributing to the competitive math community.
- Practiced problems with other members for competitions (AMC, etc.).
- 75+ Math Students.

Co-Founder, Treasurer, AI and Machine Learning Club,

August 2023 - Present

- Advertised clubs to students (150+ combined members).
- Managed club finances/documentation.
- Taught complex AI topics through monthly slides/lectures.
- Raised awareness about ethical concerns of modern AI.
- Taught useful Python modules for AI to expand understanding.

Co-Founder, Treasurer,

Data Analysis Club, August 2023 - Present

- Created the first data science club at school.
- Developed curriculum involving tutorials for various relevant tools for data science (Tableau, R, SQL, etc.).
- Taught 20+ students how to use machine learning-relevant Python libraries (Pandas, NumPy, etc.).

Treasurer, Rubik's Cubing Club

August 2023 - June 2024

- Managed Club Finances and Organized Fundraisers, Raising \$200.
- Created EVHS's first competitive cubing community.
- Taught complex algorithms to explain the mathematics of cubing to 20+ members.

Secretary, Podcasting Club, EVHS

August 2023 - June 2024

- Recorded 5+ Episodes of School Podcast.
- Interviewed club presidents and student leaders to promote those organizations.
- Taught speaking and content creation skills to 40+ members.

ADDITIONAL ACTIVITIES

Volunteer Tutor, The Parris Foundation,

December 2022 - Present

- Spend 4+ hours weekly teaching STEM concepts such as mathematics to low-income students
- Gained skills in collaboration, conveying ideas in STEM, and working with younger children

Inspirit AI (Summer Program), June 2023

- Worked with Stanford and MIT alumni for research on the different uses of AI/ML, the ethical concerns of AI/ML, and the fundamental principles of AI/ML
- Developed a machine learning system to detect emotions in faces based on facial expressions
- Learned usage of Python libraries regarding machine learning such as NumPy, Pandas, Seaborn, etc.
- Learned about concepts such as Linear and Logistic Regression, Natural Language Processing, Neural Networks, Computer Vision, and more.

Troop 264 Eagle Scout Service Project,

December 2022 - September 2024

- Led 28+ volunteers over 5 weekends, in Eagle Scout Service Project.
- Designed/prepared for the project over six months.
- Built 5 shoe racks & storage benches from scratch for a local Hindu temple to help with organization, cleanliness, and provide comfortable spaces for the elderly to sit.
- Rendered custom digital models of furniture using AutoCAD software.
- Handled funds & sourced wood/tools/donations from Home Depot.
- ~100 hours spent, along with ~300 hours total spent by volunteers.