


# Eegan Ram

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## Education

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### College.....

**Stanford University** 2024 – 2028

*Planned Program: Physics BS + Computer Science MS*

### High School.....

**The Davidson Academy of Nevada** 2020 – 2024

*4.0/4.0 UW GPA*

*Selected Coursework: Chinese III/IV, Advanced Physics, Calculus I/II, Advanced Chemistry*

**University of Nevada, Reno** 2020 – 2024

*Concurrent enrollment during high school*

*Selected Coursework: Quantum Mechanics (I and II), Differential Eqs., Linear Algebra, Multivariable Calculus*

### Programming experience.....

Work: Python (/w Django), Java, SQL,  $\text{\LaTeX}$ . Personal: R

## Selected work experience

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### Research internships.....

**Researcher:** Soljacic Photonics and Modern Electromagnetics Group @ MIT *July 2023 - Present*

Working on furthering research into quantum circuits with hybrid quantum-classical systems, with the goal of optimizing quantum chemistry simulations. Further development of research from RSI.

**RSI participant:** CEE Research Science Institute @ MIT *Summer 2023*

Selected among 100 students worldwide (out of > 1700) for the RSI. Conducted quantum information science research under the Soljacic Group. Produced a research project and paper that studied the applications of graph states in quantum computing to quantum chemistry problems; awarded top 10, gave encore presentation to panel of experts.

**Research Assistant:** Weinstein Lab @ University of Nevada, Reno *February 2022 – October 2023*

Configured lab hardware and developed custom software to assist with photon counting, error correction, and enabling unique/flexible experimental design while also conducting spin-state calculations to justify experimental methods.

### Software.....

**Researcher:** Elfass Lab @ University of Nevada, Reno *March 2024 - May 2024*

Helped build a database for secure data storage and analysis for the group's work in seismology with national labs.

**Software developer:** AI Camp Inc. *August 2021 – October 2023*

Worked on using Data Science to optimize and automate servers for AI Camp. These processes were done using Python in AWS, Docker, nginx, and airflow servers. Helped achieve 90% cost reduction in company server costs.

**Data Analyst:** AI Camp Inc. *October 2020 – June 2021*

Utilized Data Analysis techniques for market analysis, to reach customers for the company's marketing strategy. Used Python and libraries such as Pandas and Numpy to gather and analyze the company's data.

**Software developer:** LinkHS

Summer 2022

Developed a frontend system that incorporates various APIs and ML classification models to find and recommend jobs and internships to teenagers.

**Programming Lead:** First Tech Challenge Robotics

June 2022 – March 2023

Created team codebase to improve Computer Vision and Localization algorithms using physics. Won Finalist Alliance Captains + Connect Award @ Regionals.

**Volunteer and outreach**

**Chair:** Reno Youth City Council

November 2023 – May 2024

Elected chair out of 7 appointees for the Reno Youth City Council, helped advocate for substance abuse policy changes locally.

**Other**

**President:** Davidson Academy Physics Club

2022 – May 2024

Helping members prepare for physics contests; hold experiments and demos.

**Teacher:** Davidson Academy Intro to Scientific Research

August 2023 - May 2024

Designed the curriculum to teach High School students the fundamentals of scientific research like data analysis with Python and R, how to use  $\LaTeX$ , how to write a paper and literature review, and give a scientific talk. Helping students complete independent research projects to present at the 2024 UNR undergraduate research symposium.

**Student Aide:** Chinese I, American Literature, Advanced Physics

August 2022 - May 2024

Assisted the Chinese, Physics, and English depts. with teaching by conducting lessons, creating learning material, and grading homework/tests. Served for the Chinese & English departments in the 2022-2023 school year, and for the Physics department in the 2023-2024 school year.

**Awards**

- Research Science Institute Encore Presentation (Top 10):** awarded August 2023
- Congressional App Challenge 2nd Place:** awarded January 2023
- FIRST Finalist Alliance Captain Award:** awarded February 2023
- Presidential Volunteer Service Award:** awarded November 2022
- National Merit Finalist:** awarded September 2023

**Selected Test Scores**

**ACT:** 36/36/36/36

**AP Physics C/Bio/Calculus BC/Statistics/CS A/Chinese/Chem:** 5