

# Eegan Ram

✉ eegan@eegan.us • 🌐 eegan.us • 🌐 eeganr • in eeganr

## Education

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### High School.....

**The Davidson Academy of Nevada**

**2020 – 2024**

3.99 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, Linear Algebra, Multivariable Calculus

### Programming experience.....

Python (and Django), Java, R, SQL, L<sup>A</sup>T<sub>E</sub>X.

## 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 – present*

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.....

**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 – present*

Elected chair out of 7 appointees for the Reno Youth City Council, where I am working to help advise educational policy and outreach efforts to the youth of the city of Reno and coordinating events to help youth learn about career development.

**Lead Facilitator:** NASA Astro Camp, Nevada *2022 & 2023*

Ran 55+ NASA Astro Camps that brought STEM education about engineering & astrophysics to elementary and middle school students in the Reno area. Reached 700+ students working as curriculum design lead/lead facilitator.

## Other.....

**President:** Davidson Academy Physics Club *2022 – present*

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

**Creator:** AliveNevada *Fall 2022 - Present*

Developed the AliveNevada WebApp to utilize computer vision algorithms in assisting with gathering conservation data for research on individuals' phones.

**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 - Present*

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

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**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

**FIRST Connect Award:** awarded February 2023

**National Cyber League #10 Team Power Rankings:** awarded December 2022

**Presidential Volunteer Service Award:** awarded November 2022

**National Merit Finalist:** awarded September 2023

## Test Scores

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

**AP Computer Science A:** 5

**AP Physics C: Mechanics & Electricity & Magnetism:** 5

**AP Calculus BC:** 5

**AP Biology:** 5

**AP Statistics:** 5

**AP English Literature:** 5

**AP Microeconomics:** 5