Ravi Dhaliwal

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EDUCATION

University of California, Los Angeles **Los Angeles, CA**
Physics B.S. Expected Graduation 2025

- **GPA:** 3.66
- **Relevant Coursework:** Circuits, Statics, Mechanics of Materials, Properties of Materials

WORK EXPERIENCE

L'SPACE NASA Proposal Writing and Evaluation Experience (NPWEE) **Remote**
Fellowship Sept 2023 – Dec 2023

- Currently gaining experience on creating effective proposals for funding on conceptual engineering projects, specifically new methods of **propulsion systems** for space travel

University of California, Riverside **Riverside, CA**
Internship - Student Researcher, Department of Engineering June 2022 – Feb 2023

- Worked in a group of three to design a venturi tube to be used in a water filtration system. It achieved an efficiency of 13% compared to the conventional method of distillation.
  - Designed the tube according to the principles of fluid dynamics in **SolidWorks**.
  - Verified the design would work under load and achieve a sufficient pressure drop by using **SolidWorks** to conduct **CFD simulations**.
  - Categorized all parts & materials needed for three prototypes and helped get them machined.

Mt San Antonio College **Walnut, CA**
Physics Tutor, General Physics Feb 2022 – June 2023

- Assisted large groups in class lectures and labs, held separate office hours for tutoring.

Rocketry Club **Walnut, CA**
Member August 2022 – Present

- Designed and fabricated a 3-foot-long rocket with **avionic systems**, which was launched to 1000m and I received a level one and level two certification from the National Association of Rocketry.

PROJECTS

Audio to MIDI (C++) May 2022 – Present

- Created a program that converts wav files to midi files.
  - Utilized waveOut API to send processed audio data to speakers
  - Used FFTW to conduct frequency analysis on segmented audio chunks
  - Self-implemented **DSP filters** to separate audio into three bands to assist in frequency analysis

Predictive Vehicular Modeling (MATLAB) Jan 2023 – February 2023

- Worked in a group of four to create a mathematical model of a sedan car
  - Used an OBD reader to obtain data outputted from the car and parsed it in MATLAB
  - Created a predictive model of braking distance, horsepower, & engine rpm at various speeds

Botnet Client/Server (C#/C++) Jan 2020 – July 2021

- Created a client capable of packet spamming, implemented both in C# and C++ with a master server written in C#. Utilized standard libraries and **parallelized** both the server and client.

SKILLS, ACTIVITIES & INTERESTS

Languages: C++, C#, C, Java, Python, MATLAB, Excel
Certifications & Training: SolidWorks CSWA