DHRUV SAINI

dhruvs.pages.dev @ dhruv9saini@gmail.com

EXPERIENCE

A Sustainable Future

CEO | Oct 2023 - Present

- Built and scaled the **PCM**, an AI-powered mobile app predicting paper use, to **30,000 students** nationwide in over 150 schools
- Trained a symbolic regression model with **PySR** to predict paper consumption based on school demographics
- Leading **a team of 20** to develop a nonprofit website and iterating on AI model, now helping save 1.7M sheets of paper per year
- Received **$30k** in grants supporting sustainability impact

University of West Virginia: SG-REAL Lab

GIS/Software Research Intern | Jul 2025 - Present

- Created a 3D modeling and flood segmentation pipeline on any power grid to determine which nodes need most investment

Dimension

Software Engineer Intern | Jun 2025 - Sept 2025

- Implemented webhooks to allow external companies to integrate with the enterprise collaboration platform
- Led the process to allow Stripe, Vercel, Github, and many other hosted bots in channels
- Revamped and modernized the UI, completing several refactors that culminated in a **70%** reduction of load time

University of Washington

Quantum Technical Writing Intern | Aug 2024 – Sept 2024

- Worked with Prof. Anantram to develop an editing workflow for his book *Quantum Mechanics for Scientists and Engineers*
- Used Python and React to automatically compare textbook versions and allow students to easily select the best version of any paragraph
- Accelerated editing time by **15x**

PROJECTS

Urban Heat Islands: A Geospatial Analysis | *Jupyter, Pandas, Matplotlib, Pytorch*

- Trained an ML model in **Pytorch** on satellite image samples to predict the most effective method for a city to reduce urban heat stress
- Created a computer vision engine to detect small water bodies from satellite imagery and analyze effects of water infrastructure on heat stress
- Awarded 2nd place at the Washington State Science and Engineering Fair

ThinkSwitch: Iterative LoRA training and Weight Interpolation for Low-Compute Improvement on Specific-Purpose Reasoning Tasks | *Python, Transformers*

- Applied weight interpolation and LoRA to iterative distillation and amplification to greatly improve Qwen3-4B AIME score with only $3 in compute
- Awarded 1st place at the Washington State Science and Engineering Fair

Muon Browser | *Typescript, Electron*

- Created a web browser that allows the user to open and browse pages and notes on an infinite canvas
- Available to download and use here

High-Altitude Balloon Payload (NASA Space Grant Consortium HAB Camp) | *Python, Data Analysis*

- Designed and built a payload for a high-altitude balloon flight to near-space altitude
- Instrumented the payload to measure and record altitude, pressure, temperature, humidity, audio, video, and a feed of a live cricket
- Wrote Python notebooks to clean, visualize, and analyze the recorded data and summarize results, presenting

AWARDS AND HONORS

National Science Bowl

Team Captain | 2021-Present

- Founded Bellevue High School's first science bowl team, winning 1st place at the nationwide virtual competition
- Won a fully-funded trip to Washington D.C. for the National Finals

Olympiad Awards

Various | 2024-Present

- USACO Platinum Rank
- USAAIO National Finalist, Bronze Medal

ARC - The American Rocketry Challenge

Team Captain | 2025

- Captained a team of five to build a rocket that transports two eggs to 790 feet and brings them down safely within 41-44 seconds
- Qualified for the National Finals twice

EDUCATION

Bellevue High School

- 36 ACT, 100+ hours of community service, DECA ICDC finalist
- President of Programming Club, coach at Tyee MS and Odle MS programming clubs