Mehul Ghosal

mehulghosal.github.io | github.com/mehulghosal

University of Hawaii Manoa, 2020-2024
- BS in Astrophysics & Computer Science

Millburn High School, 2016-2020   4.07 cumulative GPA
- 1530 SAT; 780 Biology, 790 Math II, & 800 Physics SAT 2 Subject Tests
- 5s on APCSP, APCSA, AP Biology, and AP Physics 1 & 2
- *National Merit Commended Scholar; AP Scholar with Distinction*

Experience

Sponsorship Director for hackMHS VI (2019), 7 (2020)
- Raised over $10,000 for local hackathon through local and large sponsors; hosted over 200 students overnight annually
- Mentored + hosted Python workshop for beginner "hackers"

Co-Founder of Power Coding (2020)
- Wrote curriculums for python game-dev, web-dev, & basic machine learning; organized classes and sessions of >100 elementary and middle school students

Cool Coding Camp (2017-2020)
- Teaching python/JS game development and basic web-dev to middle school students at annual summer camp

Volunteer archery coach for Wa-Xo-Be Archery Club
- Teaching shooting technique to beginner, intermediate, and archers

Projects

Using Optical Flow to Derive Horizontal Velocities of Equatorial Plasma Bubbles
- Research project applying computer vision to atmospheric plasma artifacts
- Analysis of data to track plasma artifacts using OpenCV
- Won best Aeronautics/Astronautics Project at Rutgers JSHS, presented by *AIAA*

Millburn Vex Robotics Team 2018-2020
- Codebase for autonomous and driver control written in C++
- Wrote Dart app for customized scoring/strategies for VEX Tower-Takeover
- Quarterfinalist at Night at the Museum Signature Event, NJ State Skills Champion, NJ State Tournament Champion, 7x skills champions, 1x excellence award, & 1x tournament champions

AI-llergy
- App to help those suffering from severe allergies; novel image recognition and classification to identify potential allergens in food; Dart frontend + django/Apache backend
- Placed top 30 at PennApps 2019 fall

MHS Kiosk System
- Helped with woodworking, building physical structures + frontend with Raspberry Pi
- Implemented by high school for security signing in/out students