

# Abhay Negi

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## EDUCATION

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University of California, Davis

Both degrees expected June 2020

- Bachelor of Science, Aerospace Science and Engineering
- Bachelor of Science, Mechanical Engineering
- Physics Honor Student
- Cumulative GPA: 3.85/4.0, Engineering GPA: 3.92/4.0

## EXPERIENCE

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### Attitude Determination and Controls System Lead

September 2017 - Present

*Space and Satellite Systems*

- Guide and manage operations of sub-system for CubeSat to be launched into orbit in 2020
- Design, develop, and test magnetorquer coils and reaction wheels for attitude control
- Lead team and collaborate with Programming, Electrical, and Structure sub-systems

### Undergraduate Researcher

September 2018 - Present

*UC Davis Aeroacoustics Lab*

- Research blade vortex interaction of eVTOLs and dynamic stall of airfoils
- Analyze aeroacoustic behavior of unsteady and turbulent flows
- Model fluid dynamics in OVERFLOW with meshes generated in OVERGRID

### Wheels and Controls Engineer

January 2018 - September 2018

*UC Davis Onelooop*

- Developed CAN Bus network and protocol for pod to be entered in 2019 Hyperloop Pod Competition
- Optimized communications, programmed micro-controllers, and built circuitry for control systems
- Created CAD models and manufactured parts for pod wheels

### Designer and Drafter

July 2017 - Present

*UC Davis Lab 9195*

- Develop vacuum deposition chamber to be used in DarkSide-50 dark matter research
- Design CAD and create technical drawings for vacuum chamber
- Integrate chamber with vacuum pumps, electronics, and software

### Race Director

December 2016 - March 2017

*The Pizza Run*

- Planned and directed race that funded construction of track at Lowell High
- Contacted sponsors, advertised, created budget, arranged supplies, managed event logistics
- Successfully raised over \$15,000 and initiated construction of track

## SKILLS

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**Computer:** SolidWorks, OVERGRID, OVERFLOW, MATLAB, Java, C, Python, HTML, CSS, Excel

**Technical Skills:** CFD, CNC Machining, Manufacturing, PCB Etching, Micro-controllers, Basic Circuitry

**Communication:** Experienced in public speaking, interpersonal communication, presentations, and outreach

**Languages:** Fluent in Hindi and Urdu, Proficient in Elementary Spanish