Sidhant Vaidya

sidhantsv@gmail.com | sidhantsv.github.io

Education

York University, Toronto. Expected 2026

Bachelor of Engineering in Mechanical Engineering

GPA: 3.80/4.00

Societies/Clubs: Tau Beta Pi Honor Society, Technology & Aerospace Club, The Investors Association, ESSENCE CubeSat @ York

Skills

Software: Python, Java, MATLAB, SolidWorks, Adobe Photoshop, Blender

Languages: English, Hindi, Marathi

Experience

Peer Academic Coach, Florida Atlantic University ACCESS – Boca Raton, FL July 2019 – June 2020

- Offered personalized academic mentoring to undergraduate students, drawing from my experiences to assist them in navigating the challenges of higher education effectively.
- Provided guidance on study strategies, time management techniques, and organizational skills, empowering students to optimize their academic performance while balancing other responsibilities.
- Cultivated a supportive and inclusive environment conducive to student growth, emphasizing the interconnectedness of academic success with campus engagement, financial literacy, and work-life balance.
- Collaborated closely with university staff and faculty to identify students' academic needs and implement targeted interventions and support initiatives, ensuring a proactive approach to student support.

Projects

NASA FSGC Hybrid Motor Rocket https://floridaspacegrant.org/program/rocket-competition-for-beginners/

- Played a pivotal role in our success in the amateur rocket competition as a member in the mechanical division, where we won in both the maximum altitude and the 2000 feet altitude challenge categories.
- Collaborated closely with team members in the mechanical division to design, and construct the hybrid high-powered rockets in Solidworks and run steady-state thermal analysis to meet the specifications of both competition categories.
- Oversaw research on making our own solid PVC fuel grain as an option to achieve an even higher altitude compared to last year. Assisted in testing nitrous oxide for the oxidizer and attended static firing tests to verify their viability in real life.
- Assembled, and soldered the altimetry kit onto the rocket and conducted testing to verify its values. Overhauled part of the Python code to make it cleaner and more usable for future club members.

ESSENCE CubeSat launched from the ISS http://www.yorku.ca/cubesat/the-project.html

- Ensured integration of components within the CubeSat framework. Collaborated with other subsystem divisions to ensure compatibility and functionality across all satellite systems.
- Addressed discrepancies in component design that hindered meeting project criteria, or parts that did not fit. Utilized Solidworks to redesign parts, optimizing them for performance, manufacturability, and adherence to project requirements.
- Conducted thermal steady-state analysis to evaluate the thermal behavior of CubeSat components under operating conditions. Employed simulation tools to predict temperature distributions and identify potential thermal issues.
- Generated technical documentation, including design specifications, test procedures, and analysis reports. Communicated project progress, findings, and recommendations to project stakeholders through regular updates and presentations.

Scaled-down Airport Renditions for Flight Simulator Programs https://forums.x-plane.org

- Initiated the project from scratch, and learned tools such as Blender, niche software specific to flight simulator scenery development SDK, and Adobe Photoshop and GIMP for texture manipulation . Invested over 1.5 years on the largest project to enhance the realism and visual fidelity of the airport models.
- Paid meticulous attention to detail and leveraged aerial imagery, satellite data, and aeronautical charts to ensure accuracy and authenticity in the virtual representations. Incorporated landmark features, signage, and infrastructure to replicate the unique characteristics of each airport.
- Distributed the completed airport models through an online platform dedicated to flight simulation enthusiasts with over 8000 downloads collectively across all airport projects. Contributed by providing immersive and realistic training environments for aspiring and seasoned pilots alike.