Abhigyaan Deep

Aerospace Engineer
Cyber Physical Systems

Iowa State University
Sophomore, 3.83 GPA

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Skills

- SolidWorks
- Ansys simulation
- Cyber-Physical integration
- 3D Printing
- Team management
- Python
- MATLAB
- Web design

Hi, I'm Abhi!

I am an **Aerospace Engineer** driven by an insatiable curiosity and a passion for turning ambitious ideas into reality. From designing and manufacturing jet engines and pioneering in autonomous robotics to building software that bridges the gap between the digital and physical worlds, I am fueled by a love for *exploration* and *self-learning*. With every project, I strive to push boundaries and inspire innovation in aerospace and beyond.

Education

- GPA: 3.83 │ Minor: Cyber-Physical Systems
- Experience in thermodynamics, structural design, and avionics modeling
- Designed combustion chambers and developed simulation systems
- Skilled in autonomous navigation, sheet metal CAR and manufacturing, and software-hardware integration

Projects

Combustion Chamber Design & Manufacturing J.E.T.

- Designing and manufacturing the heart of the jet engine for maximal efficiency at sea level.
- Working with rolled stainless steel and aluminum for the production body.
- Using copper & plastic 3D printing for prototyping parts.

Lead Robotics Engineer & Programmer Nerdy Birds, FTC

- Led design, programming, and manufacturing, achieving best team performance in 10 years.
- Developed an autonomous system using computer vision and A* pathfinding.
- Engineered driver-relative controls for intuitive motion with mecanum wheels.
- Secured 1st place at districts and ranked in the top third at state level.

Founder & Maintainer │ BlitzKit Hobby - https://blitzkit.app/

- Built a real-time visual armor simulation for 700+ tanks from WWI to the Cold War.
- Developed a GLSL-based OpenGL renderer to model shell penetration behavior.
- Simulates kinetic, explosive, and HEAT shell interactions with spaced and primary armor.
- Blended aerospace principles of fluid dynamics with material deformation.