# Abhigyaan Deep

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## Education

**Iowa State University** May 2027

Bachelor of Engineering, Iowa State University Ames, Iowa

- Major: Aerospace Engineering GPA: 3.83
- Minor: Cyber-Physical Systems (CPS)

## Experience

**NASA Psyche Intern** Sep 2025 - Present

Platinum Class, details limited due to NDA

- Working with engineers and scientists maintaining and analyzing the spacecraft as it nears an orbit around the Psyche asteroid by 2029.
- Produced public engagement material translating complex into publicly accessible content

**OpenUAS Research - Laboratory For Temporal Logic** Aug 2025 - Present

Avionics, Embedded Systems, and Software Integration

- Designed and integrated FPGA-based (Field Programmable Gate Array) avionic systems for a reconfigurable, open-source Unmanned Aerial System (UAS).
- Implemented predictive system health management and runtime monitoring algorithms.
- Maximized commercial-off-the-shelf (COTS) parts for repeatability and pushed to GitHub.
- Documented flight characteristics in LaTeX and published on IEEE Xplore.

## Skills

**Software:** SolidWorks, OnShape, Ansys Fluids, Git/GitHub

**Languages:** C, C++, C#, Go, Rust, Python, MATLAB, R, Java, JavaScript, TypeScript

**Other:** Systems Integration, Computer Vision, Acrylic Painting, Engineering Economics

## Projects

**Zephron** Aug 2025 - Present

Club, Coandă and Ground Effect Drone, Fuzzy and PID Controls, Design and Manufacturing

- Organized team to form preliminary designs and budgets to acquire funding.
- Created PID and AI-trained capable hardware in a tightly integrated hull.
- Performed Ansys CFD and confirmed results on 3D-printed prototype.

**The Jet Engine Team** Oct 2024 - Present

Club, Combustion Chamber Design, Optimization, Manufacturing, and Testing

- Designed, did CFD, and optimized combustion chamber for sea-level conditions.
- Manufactured with rolled stainless steel and aluminum for the production body.
- Tested integration and pressure tested with compressor using 3D-printed prototypes.

**BlitzKit** Apr 2023 - Present

Hobby, Development, Production, Maintenance, Real-Time Heuristic Simulation

- Built a real-time visual armor simulation for 700+ tanks from WWI to the Cold War.
- Simulated kinetic, explosive, and HEAT shell interactions with spaced and primary armor.