

Abhigyaan Deep

abhigyaan457@gmail.com | linkedin.com/in/abhigyaan-deep | abhi-deep.com

Education

Iowa State University	May 2027
Bachelor of Engineering, Iowa State University	Ames, Iowa
• Minor: Cyber-Physical Systems (CPS)	GPA: 3.83

Research Experience

OpenUAS - Laboratory For Temporal Logic	2025 - Present
Undergraduate Researcher, Avionics, Embedded Systems, and Software Integration	
<ul style="list-style-type: none">Designed and integrated FPGA-based 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.Documented health and flight characteristics in LaTeX for a formal research paper on IEEE Xplore and retained code version history through Git & GitHub.	

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	2025 - Present
Club, Coandă and Ground Effect Drone, Fuzzy and PID Controls, Design and Manufacturing	
<ul style="list-style-type: none">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	2024 - Present
Club, Combustion Chamber Design, Optimization, Manufacturing, and Testing	
<ul style="list-style-type: none">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	2023 - Present
Hobby, Development, Production, Maintenance, Real-Time Heuristic Simulation	
<ul style="list-style-type: none">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.Simulated kinetic, explosive, and HEAT shell interactions with spaced and primary armor.Blended aerospace principles of fluid dynamics with material deformation.	