

Adil Shirinov

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Education

Georgia Institute of Technology – Aerospace Engineering B.S. and M.S.

Design Methods, CFD, Combustion, Propulsion, Thermodynamics, Fluid Dynamics

Aug 2020 – May 2025

GPA: 3.87 B.S. | 3.88 M.S.

St Clare's Oxford, UK – International Baccalaureate

Business & Management, Physics, Math

Sep 2017 – May 2020

GPA: 3.88

Skills

Engineering: **SolidWorks, Ansys Fluent**, Converge CFD, Cantera, **GD&T, FEA/CFD Analysis**
Manufacturing: CNC, Mill, Lathe, 3D Printing, Composite Materials, **Carbon Fiber** cutting
Technical: MATLAB/Simulink, **Python, C++**, LabVIEW, Tecplot, OpenMDAO, Ansys STK
Management: **Agile**, JIRA, Gantt Charts, Teams Project, Risk Analysis, Technical Documentation
Other: Strong **Leadership** and Team Management, Fluent in English, Russian, and Japanese

Experience

Ben T. Zinn Combustion Laboratory – Automation Architect

Sep 2022 – May 2025

- Conducted **CFD** analysis on **NASA** hybrid-electric engine using **Ansys Fluent** and Converge
- Led an automation project to streamline design processes through **Python** and **C++** scripting
- Performed combustion stability analysis and flame dynamics studies using parametric studies
- Created **SolidWorks** flange models, performed bolt calculations, installed **hardware**
- Tested a Fuel Rich Relaxation Zone injection strategy, achieving 0.7% NOx reduction

GenetriX – Team Lead

Aug 2023 – May 2024

- **Led 10** aerospace engineers to design a winning solution for **AIAA Space Design** competition
- Implemented Entry, Descent, and Landing (EDL) system with ablative heat shield for 15 aircrafts
- Developed a Python **Digital Twin** to simulate and optimize the integration of all mission-critical subsystems
- Coordinated project workflows combining **Agile** sprints with **Gantt chart** visualization
- Took **first place** in AIAA GT Fall 2023 Capstone convention, proposed technical paper to **NASA**

Georgia Tech – Teaching Assistant

Jan 2023 – May 2023

- Instructed 71 students on Engineering Dynamics covering physics of rigid body motion
- **Mentored** students in analytical problem-solving and engineering methodology

Projects

Rocket Engine Design & Optimization

Feb 2025

- Designed a **Methane-Air** liquid rocket engine achieving 385s specific impulse
- Performed combustion analysis using **Cantera** and Nozzle Design using **Rao's method**
- Implemented a **gas-generator** engine cycle to achieve 8000m/s deltaV and 1MN Thrust mission parameters
- Optimized the engine using **OpenMDAO** IPOPT optimizer and **Scikit-Learn** surrogate models

Combustion Diagnostics Platform

Jan 2025 – May 2025

- Deployed a comprehensive database powered dashboard for Lab to accelerate design improvement
- Created interfaces for **parametric design** studies, automated mesh generations and post-processing
- Utilized Genetic Algorithms to predict optimal design paths

RoboTech Hackathon – Team Lead

Apr 2022

- **Led 3** engineers to develop autonomous oceanic microplastic cleaning system
- Created a robotic buoy swarm system with 95% capture efficiency
- Used a short-term **Agile** strategy to create a feasible low-cost design in 36 hours
- Won **first place** in Design, second place overall, and 'Most Creative Project' award

Design Build Fly

Mar 2022 – Apr 2022

- Designed 10-foot wingspan electric aircraft housing two autonomous gliders for payload deployment
- Reinforced critical load paths with **carbon fiber** composites at wing root
- Developed **C++** target navigation algorithms for Pixhawk software