

IOSIF-OLIVER SZAVUJ

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Education

Stanford University

Stanford CA, USA

MS Aeronautical and Astronautical Engineering – 4.06 GPA

2026

BS Aeronautical and Astronautical Engineering, Minor in Computer Science – 4.01 GPA

2025

- Stanford Flight Club President, AIAA DBF Chief Engineer, TA for AA146A/B – Aircraft Design (Capstone), SSI Lead
- Relevant Coursework – Applied Aerodynamics, Intermediate Fluid Dynamics, Flight Mechanics & Controls, Aircraft Design, Feedback Control Design, Atmospheric Flight, Space Flight, Lightweight Structures Design, Programming Abstractions, Robotics and Autonomous Systems, Operations of Aerospace Systems, Engineering of Systems, Aerodynamics for Racecars.

Honors, Awards and Achievements

- Stanford Tau Beta Pi Engineering Honor Society (2023)
- Stanford Hoover Institute Distinguished Writer Award for research into the Soviet Space Program (2023)
- Member of the Romanian National Olympics Robotics Team (2018)
- Excellence Award in Robotics from the Romanian Embassy in Washington DC (2018)
- Recognized by the President of Romania for Robotics Achievements (2018)
- Team member Autovortex Club, Romanian National FTC Robotics team (2015 to 2018)
- Created a home-built drone to deliver medicine over short distances in urban areas (2018)

Research Academic Work

- *Stanford Flight Club* (2022 – Present) – Club President and Aerodynamics Lead for the AIAA Design-Build-Fly competition team, focusing on conceptual aircraft design and subsequent aerodynamic analysis, stability analysis and optimization.
- Aircraft Aerodynamics and Design Laboratory (2024 – 2025) – Developed a simulation environment implementing a VLM and FEA for the aeroelastic study of joined-wing aircraft configurations to generate optimized designs for cruise performance.
- Aircraft Design Laboratory (2025 – Present) – Aircraft Design Laboratory (2024 - Present) - Developing a methodology to use vortex-particle methods and FW-H to feed in a LLM and predict aero-acoustic noise profile for rotor-wing configurations.
- *Private Pilot License* (2018 - 2020) – completed coursework; piloted Cessna 182/172, Kodiak 100/900 and IAR-46 aircraft.

Professional Work Experience

Joby Aviation – Flight Test Engineering Intern

Santa Cruz/Marina, CA Jun 2025 – Present

- Authoring and executing flight test plans for flutter and envelope expansion in support of FAA certification of the Joby S4 2.1a
- Writing and validating automated scripts for strain gauge network configuration in propeller vibration measurement systems.

Gulfstream Aerospace Corporation – Flight Dynamics/Control Law Intern Savannah, GA Jun 2024 – Sep 2024

- Developed code in conjunction with Simulink harnesses to validate G400 linear CLAW models, delivered TFs and SS matrices.
- Continuously improved and added functionalities to support scripts used for CLAW analyses, led meetings to share updates.
- Generated and evaluated data for the G400 Pitch AP and Alternate Mode Linear Analysis Reports, wrote associated reports.
- Produced and compiled G400 Alternate and Normal Mode roll mixture scheduling data for the Loads delivery.

Daher-Kodiak Aircraft Company – Aircraft Engineering Intern

Sandpoint, ID Aug 2023 – Sep 2023

- Led the CAD process, material selection and validation process of a fire test lab fixture used to evaluate aircraft materials under 60 Hz vibration, 2000° F flame and 1.5 bar negative pressure for FAA certification, allowing for in-house testing, reducing costs.
- Assisted with identifying sources of vibration on flight-test airframes. Through aerodynamics analysis, presented engineering solutions for vibrations observed in the landing gear strut assembly and anti-icing panels for the Kodiak-900.
- Led engineering and integration of a new charger on the Kodiak-100 for EASA certification, implemented in European deliveries.

DroneUp – Aerospace Innovations Intern

Virginia Beach, VA Jun 2023 – Jul 2023

- Led the development of a Hardware-in-the-Loop Simulator to test drone hardware solutions in a custom-coded environment embedding the native Auterion suite for accelerated testing in zero-trust conditions, reducing hardware downtime post-crash.
- Developed structural risk mitigation solutions to improve the reliability of parachute deployment in abnormal flight conditions.

WindBorne Systems – Aerospace Engineering Intern

Mountain View, CA Jun 2022 - Aug 2022

- Led the CAD, development, and CFD optimization of a drone built for low-speed endurance flight. Programmed the associated avionics and aircraft controls interface in C++. Iteratively improved the design following manufacturing feedback, reducing weight.
- Programmed a simulation environment to test and validate the drone's flight characteristics and stability during conceptual design.
- Engineered in-house systems and scientific equipment for high-altitude balloon research.

Romanian InSpace Engineering – Avionics Intern

Bucharest, Romania Jul - Aug 2018, Jul - Aug 2019 and Oct 2020 - March 2021

- Created a Python Kalman Filter to improve the location accuracy of in-house rockets, launched high altitude balloons to test.

Skills

- Software Experience: CFD – Luminary, XFOIL, Ansys, AERO-F, SUAVE. CAD – Siemens NX, Fusion360, Catia, SolidWorks.
- Programming Languages – MATLAB, Java, Python, C++, Simulink, LaTeX.
- Hobbies: Piloting, Formula 1, Flight Simulation, Conceptual Aircraft Design, Marathon Running, Sailing, RC Aircraft.