Ori Algave

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EDUCATION

University of Florida, **Herbert Wertheim College of Engineering** **August 2024-Present**

- **Seeking a Bachelor of Science with a Major in Aerospace Engineering** Gainesville, Florida

Skills: SolidWorks, OnShape, MATLAB, ANSYS Fluent, PixInsight, ASI AIR, DeepSkyStacker, AstroImageJ, Photoshop, CorelDRAW, Excel, Microsoft Word, PowerPoint, CapCut, Canvas, Notion, Public Speaking, Hebrew Language, Research, Astrophotography,

ENGINEERING AND TECHNICAL EXPERIENCE

Aerosciences Engineer **August 2025-Present**

Swamp Launch Rocket Team Gainesville, Florida

- Perform CFD in ANSYS Fluent using RANS models to compare nosecone, fins, and boattail designs to analyze design efficiency; deliver Cd vs. Mach curves to select lowest-drag geometry. As well as verify CFD processes with flight data and Open Rocket RAS Aero simulations all while maintaining detailed documentation of these processes and iterations.
- Create watertight CAD and boundary-layer meshes with inflation layers; confirm mesh independence for repeatable results.
- Analyze ascent from Mach and angle of attack; quantify center of pressure vs. center of gravity margin and recommend changes to meet the IREC 10,000 ft apogee.
- Collaborate with Propulsion and Structures sub teams on mass properties and collected data; present figure and memos for internal design reviews.

Aerodynamics/ Manufacturing Engineer **August 2025-Present**

Gators Design Build Fly Gainesville, Florida

- Drove dozens of design iterations and multiple flight prototypes using XFLR5 with targeted CFD validations; computed lift/drag polars and stability derivatives to optimize control-surface sizing/ placement and AoA, boosting lift-to-drag and cutting predicted drag by 20% under AIAA DBF mission constraints.
- Certified and trained for the Mechanical and Aerospace Engineering Design Lab; operate mills, lathes, bandsaws, composites and 3D-printing tools to fabricate and assemble airframe components using expensive materials, contributing hours per week for our prototype.

Programming Director **March 2025-Present**

Chabad at the University of Florida Gainesville, Florida

- Lead and coordinate 8 student committees, applying project management and systems-based approaches to plan and execute programs serving 1,500+ Jewish students annually.
- Optimize event operations through strategic resource allocation, task delegation, and workflow improvements to enhance efficiency and impact.
- Collaborate with executive staff and student leaders to design, pilot, and scale new initiatives, using data-driven feedback and iterative design cycles to grow engagement and organizational capacity.

WORK EXPERIENCE

Intramural Sports Official **May 2025-Present**

University of Florida Recreational Sports Gainesville, Florida

- Officiate 15-20 intramural games per week across 5 various sports; manage game flow, enforce rules, and accurately record scores.
- Certified by UF RecSports to officiate and score keep co-recreational, single-gender, and fraternity leagues; completed 30 hours of rules, safety, positioning, timing, and conflict de-escalation training.
- Contribute dozens of hours and attend weekly meetings and clinics to calibrate mechanics and continuously improve officiating quality.

Warehouse Associate **June 2022-August 2022**

Premier Dead Sea USA Fort Lauderdale, Florida

- Managed a 30,000 square foot inventory by efficiently stocking products, labeling items, and packaging shipments with precision; utilized mobile scanners and an inventory database to pick and pack orders, ensuring accuracy
- Implemented an organized aisle-by-aisle inventory system, resulting in 50% improved workflow and efficiency: operated machinery, including a stretch wrap machine and forklift, to facilitate smooth warehouse operations

PROJECTS

Solid Works Wind Tunnel **May 2025-September 2025**

- Designed a modular desktop wind tunnel in SolidWorks; 80+ hours of iterative CAD optimized nozzle/ diffuser/ test-section geometry.
- Engineered dual-mode operation, exhaust (lift generation) and intake (flow visualization), for versatile aerodynamic testing.
- 3D-printed magnet coupled, modular prototypes; evaluated performance and assembly, validating choices with aerodynamic literature.

Exoplanetary Research **August 2023 – June 2024**

- Gathered and analyzed transit light curve data for exoplanet TOI-3819 b using a mid-level telescope, advanced imaging software (ASI AIR, AstroImageJ), and calibration techniques to calculate planetary radius and other critical values.
- Compared Results to NASA's published data, applying statistical methods (chi-squared test, degrees of freedom, and percent error) to assess accuracy and demonstrate the potential – and limitations – of amateur observational astronomy in the detection of exoplanets.

Astrophotography **July 2022- Present**

- Captured and processed high-resolution images of galaxies, nebulae, and star clusters using a sophisticated astrophotography rig composed of high-end components such as tracking mounts, cooled monochrome cameras, and narrowband filters.
- Operated and calibrated complex imaging systems utilizing software's like ASI AIR, PixInsight, and DeepSkyStacker which requires precise alignment, polar calibration, and multi-night exposure stacking.
- Founded and grew an Instagram platform (@astroori) to showcase curated astrophotography work and explain the science behind each target, reaching and engaging an audience of 1500 followers.

OTHER INVOLVEMENT:

College Organizations: Chabad UF Mentorship Program, Sinai Scholars Society, Hillel UF, IAC Mishelanu Fellow, The Jerusalem Journey Southern Alumni Program, The Judah Fellowship, UF Rec Sports Official, UF GatorWake, AIAA Member