Alexander Irausquin-Petit

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EDUCATION

Case Western Reserve University Expected May 2028 | **Cleveland, OH**
Bachelor of Science: Mechanical Engineering and Aerospace Engineering | **GPA: 3.95 / 4.00** | Dean's High Honors

PROFESSIONAL EXPERIENCE

Sherwin-Williams *Safety Engineering Intern* May 2026 – August 2026 | **Brecksville, OH**

- Analyze equipment mechanical drawings to create preventative maintenance plans and lock out tag out procedures, and document confined spaces at new Global Research & Development Facility.
- **Skills:** Mechanical Drawings, Lock Out Tag Out, Safety Engineering, BIM, Autodesk Revit, Excel, Word, Teams

Automotive Engineering Project Self-Taught Mechanic June 2025 – August 2026 | **Cleveland, OH**

- Engineered a comprehensive performance overhaul of an older Audi into a track-ready vehicle utilizing custom mechanical design, fluid simulation, and precision machining.
- Designed a custom hydraulic active aerodynamic spoiler and integrated an Arduino-based live telemetry system to diagnose fluid pressure drops and optimize load capacity.
- **Skills:** SolidWorks (CAD/FEA/CFD), Automotive Machining, Hydraulic Actuation, Arduino, Telemetry & Data Acquisition, Fluid Dynamics

CWRU, Dr. Chris Yuan, Ph.D. *Professorial Researcher* October 2025 – May 2026 | **Cleveland, OH**

- Work with large Ohio insurance company to research new EV battery recycling processes.
- **Skills:** Lithium Battery Technology, EV Battery Systems, Electrochemistry, Excel

CWRU, Dr. Brian K. Taylor, Ph.D. *Professorial Researcher* January 2025 – Present | **Cleveland, OH**

- Researching how avian migratory navigation uses the planetary magnetic field.
- Design, construct, and program artificial simulated magnetic environment using custom-designed hardware to test navigation methods.
- **Skills:** Biomimicry, Electromagnets, TypeScript, JavaScript, React Native, C++

CWRU, Dr. Corbin Covault, Ph.D. *Physics Teaching Assistant* August 2026 – Present | **Cleveland, OH**

- Assisted hundreds of Physics students across multiple majors with important class concepts and homework assignments. Graded 100+ homework assignments and exams, providing accurate and helpful feedback to aide in learning.

LEADERSHIP & ACTIVITIES

Case Western Aeronautics Team *Member* August 2025 – Present | **Cleveland, OH**

- Design, build, and fly large-scale custom remote-control aircraft for annual competition.
- **Skills:** Airfoil/aerostructure design and manufacturing, wing load testing, data gathering and analysis.

Phi Kappa Psi - Ohio Epsilon Chapter *Member* April 2025 – Present | **Cleveland, OH**

- Active community service engagement: Long term effort in local ravine cleanup. Raise money for Tomorrow Stars charity. Past roles: DEI Chair - Spring 2026

First Tech Challenge *Lead Builder* October 2020 – June 2024 | **Englewood, NJ**

- Advanced to World Competition (Houston, Texas) (2023)

SKILLS

CSWA (Certified SolidWorks Associate)
7+ years of self-taught experience in Java, Python, React, C++, C#, HTML, and CSS.
English and Spanish native speaker.