

# AIDAN SPIRA

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## EDUCATION

**Texas A&M University**, College Station, TX  
Bachelor of Science in Mechanical Engineering  
Minor in Engineering Entrepreneurship

May 2027  
GPA: 3.96

## ENGINEERING EXPERIENCE

**Real-Time Transit Display** *College Station, Texas*  
*Project Lead* January 2026 – Present

- Programmed C++ control logic to convert live WMATA API data into real-time physical display states
- Planned SolidWorks-based 3D-printed mounts and enclosures for custom PCBs and LED displays
- Integrating firmware, electronics, and mechanical assemblies to create a physical display prototype

**Polymer Products Consultancy Project (Aggies Create)** *College Station, Texas*  
*Team Lead* September 2025 – Present

- Leading an industry-partnered project automating gasket manufacturing to enable scalable production
- Identified automation opportunities through manufacturing workflow and constraint analysis
- Designed overall mechanical assemblies in SolidWorks to support design reviews and system integration
- Awarded First Place (“Best in Showcase”) among 40+ teams for feasibility and practical implementation

**National Engineering School of Saint-Étienne** *Saint-Étienne, France*  
*Manufacturing Research Intern* May 2025 – July 2025

- Prototyped a digital twin of a 3D Printer system using custom sensors and mounts (Inventor, KiCad)
- Processed and analyzed digital twin data to increase throughput by 10% and reliability by 15%
- Collaborated with international engineers on system design, integration, and technical reviews

**Lumicomm (Aggies Create)** *College Station, Texas*  
*Design Lead, Chief Entrepreneur* September 2024 – May 2025

- Engineered an optical communication system to securely identify drones from 50m in degraded environments
- Developed custom control and decoding algorithms to achieve 500 bps and 95% reliable data transfer at 50m
- Won first place at Aggie Pitch competition, selected by panel of industry and faculty judges

**Aeronautical Systems Incorporated** *Reston, Virginia*  
*Mechanical Intern II* May 2024 – August 2024

- Developed engineering CAD models and technical drawings (SolidWorks), to enable replacement part production for E2-C, UH-60, and F-15 aircraft in regulated aerospace compliance environments
- Created custom tools which automated modeling, decreasing design time by 98%

*Mechanical Intern I* June 2023 – August 2023

- Produced 50+ CAD models and drawings (SolidWorks), to maintain legacy aircraft systems and fleets
- Reviewed 300+ legacy technical drawings to preserve critical data and ensure government compliance

## ORGANIZATIONS & ACTIVITIES

**American Society of Mechanical Engineers (ASME)** *College Station, Texas*  
*Director of Professional Development* April 2025 – Present

- Led professional development workshops to 120+ underclassmen on resumes, internships, and interviews
- Coordinated and managed the Mechanical Engineering career fair for 600+ students and 24 companies

## SKILLS

- CAD & Design:** SolidWorks, Autodesk Inventor, GD&T, Tolerance Analysis, Design for Manufacturing
- Manufacturing & Automation:** Additive Manufacturing, Machining (Milling, Lathe), Laser Cutting
- Controls:** Embedded Systems, Robotics, Real-Time Systems, Microcontrollers, Sensors, Data Acquisition
- Programming & Software:** C++ (Embedded), Python (Automation & Analysis), API Integration
- Electronics:** PCB Design (KiCad), Soldering, Signal Conditioning, Power Management
- Professional:** Technical Communication, Leadership, Collaboration, Entrepreneurship, Creativity