Aidan Spira

Herndon, Virginia | (703) 579-7193 | aidanspira@gmail.com | linkedin.com/in/aidan-spira | github.com/AidanSpira/Repo

Education

Texas A&M University, College Station, TX — May 2027
Bachelor of Science in Mechanical Engineering, Minor in Engineering Entrepreneurship — GPA: 3.96

Work Experience

National Engineering School of Saint-Étienne — *Saint-Étienne, France*
Manufacturing Engineering 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

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

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

Mechanical Engineering 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

Project Experience

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

- Programming C++ control logic to convert live WMATA API data into real-time physical display states
- Designing 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, constraint analysis, and worker safety
- 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

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 decoding algorithms in Python 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 proving viability

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 625+ students and 24 companies

Skills

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

Personal Note: *I have interests in floral design, collecting art, and writing letters/postcards from my journeys*