Billy Dolan

https://www.linkedin.com/in/billy1dolan/

EDUCATION

University of Dayton **Aug. 2022-2025**
Master of Science in Aerospace Engineering GPA: 3.00/4.00

University of Dayton **Aug. 2020-2024**
Bachelor of Science in Mechanical Engineering GPA: 3.17/4.00
Minor: Aerospace Engineering

TECHNICAL SKILLS

MATLAB, Abaqus CAE, SOLIDWORKS, Python, Arduino, SAP, Power Automate, Power BI

MECHANICAL ENGINEERING EXPERIENCE

Spectral Energies, Beavercreek, OH. November 2023 – Present

- Completed a propulsion trade study across hypersonic, commercial aviation, space industry and experimental propulsion industries.
- Research and development of Rotating Detonation Engines (RDEs).

Manufacturing Engineering Co-op Swagelok, Solon, OH. May 2023 – August 2023

- Data cleansed a business sustaining database and created a 55-page documentation on inaccuracies through 120,000 lines of data.
- Developed and sourced an automated solution through communication across multiple sites and many different groups within the organization.
- Wrote a business case driven by cost saving calculations and ergonomic improvement using an analysis of operations data.

Product Investigations Co-op Swagelok, Solon, OH. January 2023 – May 2023

- Developed a database within Microsoft Excel for detailing customer and supplier audits.
- Created a Power BI report concisely representing data from that database along with development documentation.
- Conducted multiple experiments and observed standard product performance versus modified product performance and expected product performance.

Project Engineering Intern Swagelok, Solon, OH. May 2022 – August 2022

- Developed a concise Power BI report displaying important operational and work center metrics from over 20 million rows of data to optimize machine onboarding processes.
- Assembled operator workbenches, a hand stamping assembly, and then configured the work cell to the operators' preferences, along with reworking the current standard work for the cell.

PROJECT EXPERIENCE

AFRL APOP Challenge*, University of Dayton School of Engineering* **August 2023 – May 2024 Dayton, OH**

- Designing a rapidly deploying thrust reverser with a minimum of 40% thrust reversed. Optimizing thrust to weight ratio of the thruster and redesigning the testing setup for better repeatability.
- Responsible for CFD, compressible flow calculations, experimentation directions and documentation, data integrity measures, cycle modeling, turbine component 3D modeling, and turbine-computer interfacing.

PROFESSIONAL & CAMPUS INVOLVEMENT

American Society of Mechanical Engineers, *Member* **September 2020 – Present** Varsity Esports founding member for UDRL, *Vice President* **September 2020 – Present**