

Aidan Law

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EDUCATION

University of Maryland School of Engineering

Sep 2024 - May 2028

Mechanical Engineering (GPA: 3.63)

College Park, MD

- **Achievements:** Dean's List (2024-2025), Terp's Racing Baja, IDEC
- **Coursework:** Statics, Dynamics, Engineering Design, Thermodynamics, Computer Aided Design, Material Science

PROFESSIONAL EXPERIENCE

Publicis Health

Jun 2025 - Aug 2025

Data Engineering Intern

Morristown, NJ

- Streamlined the monthly client reporting process, reducing deck generation time from several hours to just 5 minutes by engineering an automated data pipeline utilizing Python, SQL, and VBA
- Launched a digital marketing campaign by writing Python scripts that delivered targeted ads to more than 2,500 healthcare executives, expanding campaign reach
- Empowered data-driven marketing decisions, providing clear visibility into over 100,000 data points by developing dynamic Power BI and Excel visualizations

PROJECTS

Over-Terrain Autonomous Vehicle

- Awarded 1st place in a competition for designing and building an autonomous, Arduino-powered vehicle with omni-wheels for advanced over-terrain navigation.
- Led electronics wiring and integration of ultrasonic sensors, and an IMU for real-time environmental sensing
- Designed custom mounting hardware and sensor housings in SolidWorks, optimizing for weight distribution and component accessibility

Residential MEP Design

- Coordinated electrical systems for a complete residential build using Revit, achieving no spatial clashes with HVAC and plumbing networks by integrating external Revit architectural links and conducting 3D clearance checks
- Designed a 120/240V power distribution layout, automatically generating an accurate 42-circuit panel schedule by leveraging Revit's smart circuiting features to logically connect receptacles, heavy appliances, and an EV charger
- Produced professional-grade construction deliverables, ensuring a 100% accurate representation of lighting and power plans by implementing custom view templates, precise view range controls, and smart category tagging

Drill Press

- Engineered a fully functional drill press assembly, successfully integrating 30 distinct mechanical components into a cohesive 3D model by utilizing SolidWorks parametric modeling and constraint-based mating.
- Validated the structural integrity of the drill press platform, ensuring it could safely withstand a 500 kg operating load without permanent deformation by conducting static Finite Element Analysis (FEA) simulations.
- Produced a comprehensive technical drawing package, detailing 270 custom components with a complete Bill of Materials and exploded views by standardizing dimensioning, tolerances, and material specifications.

FEA Analysis Tool

- Developed a custom Finite Element Analysis tool in Python to simulate and visualize stress distribution and deformation in objects under gravitational load.
- Integrated advanced open-source libraries, including Gmsh for complex mesh generation and OpenSees for structural analysis, to build a robust simulation environment.
- Translated theoretical concepts from numerical methods into functional Python code to accurately model material behavior.

SKILLS

- Fusion360, SolidWorks, Autodesk Revit, Autodesk Inventor, Python, C++, Java, VBA, MATLAB, Microsoft Office, Excel, PowerPoint, PowerBi, GD&T, Lean Six Sigma Certified, Technical Drawings, 3D Printing