

Andrew Gothro

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<https://andy-gothro.github.io/>

Education

Graduate of Gonzaga University

Graduated: May 9th 2021

Bachelor of Science - Major in Mechanical Engineering, Minor in Physics

Work History

Techtronic Industries

2021-present

Project Engineer 1

- Coordinated multiple products through design and manufacturing updates with international teams.
- Interfaced with multiple large database systems to manage engineering documents through product lifecycle as well as communicating with outside vendors.
- Led test design, process development, documentation, and analysis for both internal and external use.

Gonzaga University - Spokane, WA

2017-2021 Academic years

Machine Shop Lead

- Assisted with manufacturing a wide range of parts for various clubs and senior projects as well as teaching new students.
- Refined skills in metal machining, using mills, lathes, hand tools, and MIG welding.

Tethers Unlimited - Bothell, WA

June-August 2020

Engineering Intern

- Produced full test report series, in-depth analysis, and thorough documentation for entire testing process.
- Updated existing tools and software to enable new kinds of manufacturing processes.
- Assisted in re-qualification and improvement for proven SmallSat components.

Collins Aerospace - Everett, WA

May-August 2019

Materials and Flammability Intern

- Developed cure process for new composite layup process.
- Produced engineering drawings and models for multiple projects using both Solidworks and NX.
- Assisted with detailed failure mode effects analysis for interior monuments for OEM customers.

Skills

Solidworks

9 years experience

- Versed in design for assembly and repair, accommodating limited manufacturing capabilities.
- Experienced in bottom-up, top-down modeling as well as configurable parts.
- Certified Solidworks Associate - 2018

Additive Manufacturing

8 years experience

- Led my capstone senior design team to design and build a simultaneous 5-axis FDM 3d printer, and adapt existing software to produce non-planar layers for improved surface finish, mechanical properties, and aesthetic appearance.
- Experienced in mechanical design specifically for optimizing parts for 3d printing.

Other skills:

Siemens NX, Teamcenter, Geometric Dimensioning and Tolerancing (GD&T), Document control, MatLab, Gcode for 3d-printers, Microsoft Office, Macros, VBA, Failure Mode Effects Analysis (FMEA), Engineering Drafting, Composite layups, Design for Manufacture (DFM), Design for assembly (DFA)

Projects

Capstone Project: 5-Axis FDM3d printer– Design lead

2020-2021

- Modified existing FDM 3d printer Motion and control hardware for additional degrees of freedom.
- Developed script to produce translational tessellated layers to demonstrate improvement in mechanical properties.

Gonzaga SAE Baja Club Design team Lead

2019-2021

- Led design for steering, suspension, braking, drivetrain, and frame systems.
- Developed team's first custom gearbox, while also incorporating a selectable 4wd system.
- Optimized component geometry for off-road racing characteristics, durability, ease of manufacturing, and repair.

Gonzaga ASME Rocketry Club – Integration team lead

2017-2021

- Organized component layout and configuration for optimal mass properties and flight performance.
- Led construction of the team's first custom carbon-fiber nose cone, while teaching layup methods.

Boy Scouts – Eagle Scout

2007-2017

- Project: Designed and built custom storage shed for local YMCA.