

Anya L. Keller

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Portfolio: anyakeller.github.io/portfolio

EDUCATION

Boston University BS, Mechanical Engineering, Manufacturing Concentration, GPA: 3.43

May 2024

Stuyvesant High School, New York, NY

Jun 2017

EXPERIENCE

BU Engineering Product Innovation Center

Boston, MA

Machine Shop Laboratory Assistant

Sep 2021 - May 2024

- Machined parts from drawings or CAD with up to 0.0005" (12.7 μ m) precision on CNC and manual machines.
- Sketched part drawings for students and advised on DFM (design for manufacturing) rules.
- Developed instructional manual for Boy 22A Plastic Injection molding machine.

va-Q-tec AG

Würzburg, Germany

Product Development Intern

Jun 2023 - Aug 2023

- Prototyped vacuum insulation panel thickness measurement device.
- Analyzed impact of thickness on accuracy of thermal conductivity calculation error in excel.
- Compiled report on theory and design of guarded hot plate apparatus for thermal conductivity measurement.

Kite and Rocket Research

New York, NY

Junior Engineer, Vacuum Splint & 8-Foot Stomp Rocket Projects

Nov 2018 - Aug 2021

- Transformed sketched ideas into CAD and procured COTS parts and raw materials from BOM.
- Delivered and tested mechanical prototypes to meet requirements and client needs (see projects).

SELECT/RELEVANT PROJECTS

Vacuum Insulation Panel Thickness Measurement Device, va-Q-tec AG

Jun 2023 - Aug 2023

- Measured panel thickness and created statistical process control chart to analyze variation across panels.
- Developed measurement procedure and calculation protocol compliant with DIN standards.
- Planned work schedule with Gantt chart and compared design options using morphological analysis.

Vacuum Splint, Kite and Rocket Research

Nov 2018 - Aug 2021

- Designed and prototyped vacuum-tight chamber with 0.5" wide modular sections for targeted splint positioning.
- Designed screw-mechanism and inflatable balloon splint designs and tested for comparison.

8-Foot "Stomp Rocket", Kite and Rocket Research

Jan 2019 - Nov 2019

- Created pressurizing mechanism, launching mechanism, and toy-inspired foam rocket in Solidworks CAD.
- Manufactured and assembled parts; tested, showcased, and ran demos at the Chicago Toy and Game Fair.
- Tested pressure limits at 90 psi (100 psi max) – launched 300 ft.

Additional Projects: Rotary Vane Pump Redesign, CV Ping-Pong Ball-Tracking Robot

SKILLS & INTERESTS

CAD & Drawings: SolidWorks, Autocad, Creo, Onshape; GD&T Part Drawings; Hand-Drawn Mechanical Drafting

FEM & Analysis: Solidworks & Onshape, Ansys Granta Materials

Machining: CAM/CNC: GibbsCAM, Fusion 360, SolidCam; Manual Milling & Turning (lathe), Waterjet and Laser Cutting

Manufacturing: Additive: SLA (Formlabs); FDM (Stratasys, Bamboo, MakerGear); PLC Programming, Universal Robotics

Software and Electronics: JavaScript, MATLAB, Python, Java, C; Arduino & ESP-32; Computer vision (OpenMV, PixyCam)

Hobbies: Languages: Italian & German (intermediate), Mandarin & French (beginner); Website Development with React