

Tom Crowther

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SUMMARY

Detail-oriented Mechanical Engineer with hands-on experience in mechanical systems integration, prototyping, and cross-functional product development. Looking for the next enthusiastic team to collaborate with and contribute to the development of new products and technologies.

ENGINEERING EXPERIENCE

Sonos Inc. - Mechanical Engineering Co-Op (18-month tenure) *July 2023 – December 2023/July 2024 - Present*

Product Design

- Designed molded and stamped part designs with GD&T and applied DFM feedback for high-volume production
- Collaborated with cross-functional EE, ID teams, and vendor to deliver P1A–EVT prototype builds
- Conducted tolerance stack-up analyses to ensure robust fit and function across 500+ prototype units
- Developed CAD models and GD&T drawings for release of 20 flex PCBs and EMI shielding components using NX
- Managed the creation of a program that is projected to reach \$4 million in annual revenue

Rapid Prototyping and Testing

- Designed and prototyped 10+ iterations of a novel mounting mechanism for electronic packaging and user interaction
- Validated mounting concepts using free-body diagrams, and refined designs with Ansys to inform material selection
- Conducted form-fit analysis of cable routing and PCB interfaces to ensure ergonomic and assembly feasibility
- Wrote and executed IR functional test plans; contributing to system redesigns based on cross-functional test feedback

Capstone Project - Digital Light Projection 3D Printer Calibration Device *January 2025 - April 2025*

- Defined objectives and managed work streams to develop an automation device; reducing data collection time by 90%
- Developed tolerance analyses to compute device accuracy and inform assembly design improvements
- Organized meeting schedules and delegated task lists to keep the team on schedule and working in parallel

Northeastern Electric Racing (FSAE) - Chassis Design Lead (2 Years Leadership) *January 2022 – May 2024*

- Led the design of a 76-part chassis and optimized structure for 20G impact with FEA, achieving a 20% weight reduction
- Coordinated integration of 10 subsystems into a manufacturable chassis architecture
- Designed and assembled a 40-part welding jig using MDF and steel; improved safety and reduced material cost by 25%
- Trained 3 team members in chassis design and fabrication, ensuring sustainable project leadership

ASME Northeastern Chapter - SolidWorks Course Instructor *September 2022 - December 2022*

- Instructed practice problems for a CSWA prep course for ~ 40 undergraduate students
- Helped students troubleshoot SolidWorks part designs and user settings

Getinge (Global Medical Device Company) - Sterilization Intern *June 2022 – August 2022*

- Conducted analysis across 250 SKUs to identify product sterilization requirements, prioritizing based on technical risk
- Authored a 60-page internal process for sterilization that has been adopted across all product lines for over 10 years

FIRST Robotics, Red Storm 509 - Team Lead/CEO (2 Years Leadership) *September 2017 - May 2021*

- Used Onshape to manage 2021 minibot assembly, and design custom parts for metal machining, cnc, and laser cutter
- Taught a team of ~10 mechanical students how to operate metal & woodshop machines, and basic modeling techniques in Onshape

Ace Hardware - *Assistant Sales Associate*

August 2019 - August 2021

- Assembled and delivered grills to improve the customer's purchasing experience
- Greeted customers and guided them through the store to improve the customer experience

TECHNICAL SKILLS

DFM Experience: Injection-molding, metal stamping/bending, flex PCBs, 3D printing, CNC/lathe, laser cutting, welding

Software Applications: SolidWorks, Ansys, HSMWorks, Siemens NX, Teamcenter, Windchill, MATLAB, TracePro

EDUCATION

Northeastern University - Boston, MA

September 2021 - May 2025

Bachelor of Science in Mechanical Engineering

GPA: 3.59

PERSONAL INTERESTS & EXPERIENCES

Mountain Hiking (AMC White Mountain 4000-Footer Club member) | Cooking | Strength Training | City Trips

Camino de Santiago - Camino de Francés - 780 km (480 miles) in 31 days

July 2025

- Minimized my use of food and material resources to stick to a tight budget of \$2000 while completing my journey
- Formed connections with and led the assembly of a 10 person group of pilgrims to increase positivity and social engagement for all at the hostels
- Cooked new recipes on the trail to provide experiences for other pilgrims

New Hampshire White Mountain 4000 Footers - 48 Peaks Summited

June 2020 - August 2021

- Coordinated and executed 27 hiking excursions with Alltrails to finish the challenge within 15 months
- Encouraged 10 peers to join my adventures and prepared medical & safety equipment for all hikes, including gear for winter and overnight excursions

Volunteer Experience

Community Servings - *Food Preparation Worker*

December 2024 - June 2025

- Prepared food and packed meals in the kitchen with other workers
- Taught new volunteers food preparation skills

Saint Elizabeth Seton Church - *Masters of Ceremony*

March 2019 - March 2020

- Assisted priest in running ceremonies during church services
- Supervised new altar servers