

Mandy Rosengren

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EDUCATION AND AWARDS

Tufts University, BS in Mechanical Engineering, *magna cum laude*, May 2020, GPA: 3.72, Dean's List (All Semesters)

American Injection Molding Institute, Mold Design: a Plastics Professional Development Course, 2023

MIT xPro, Additive Manufacturing for Innovative Design and Production, December 2021

AM Olympics, Winner of the C-17 Flight Mascot Design Challenge as Crowd Favorite, 2020

The George H. and Marion E. Gowdy Prize for Mechanical Engineering, 2019

WORK EXPERIENCE

nTop, NYC, February 2021 - Present

Industries Consulted: Medical, dental, automotive, apparel, aesthetic, aerospace, industrial

Topics Covered: Support Structures, slicing, latticing, topology optimization, field-driven design, static and thermal analysis, thermal management design, part splitting, prosthetic design, DFAM, automation with python

Senior Solutions Engineer, July 2022 – Present

- Led the production of an internal database for workflows across applications and developed 75+ workflows within that database, such as part splitting, support structure generation, automated mold design, and prosthetic design examples using a starting mesh
- Solved challenges for customers in the industries and topics above and fostered relationships that resulted in better utilization and expansion of the accounts

Senior Onboarding Engineer, November 2021 – July 2022

- Project managed the initiative to create ten courses for [nTop Learn](#) from Advanced nTopCL and Heat Exchangers to Data Driven Design and Texturing, written by the Solution and Onboarding Engineers.
- Led a team of two Onboarding Engineers to provide beginner to advanced training content, and developed and led the first in-person training since COVID

Onboarding Engineer, July 2021 – November 2021

- Led the creation of nTop Learn, which involved the development of 20+ videos on easy to advanced topics as well as 6 courses composed of text-based lessons, follow-along videos, quizzes, and sample problems on our intro topics
- Led webinars and one-on-one sessions with customers on application-specific training

Associate Customer Success Engineer, February 2021 – July 2021

- Developed content for 15+ lessons on topics for teaching nTop, developed the first self-guided training at nTop
- Taught over 15+ training topics to customers and completed training for 30+ companies in biomedical, automotive, aerospace, consumer products, and apparel industries

Stryker, NJ

AO Additive Technology Applications Intern, May-August 2019

- Redesigned biomedical products for additive manufacturing for a robotic arm, a spinal project, and a Trauma and Extremities instrument with computation design; developed a lattice structure library from the FEA analysis
- Assisted with workshops for R&D on DfAM; created documentation and tutorials for additive design; communicated with clients implementing their needs and requirements in designs; presented updates at weekly meetings and a final PowerPoint presentation for Additive Team

Bray Labs, Tufts University, *Shop Assistant*, June 2018 - May 2020

- Designed 10+ projects for the shop to demonstrate the capabilities of our tools; improved signage and videos Adobe Suite; assembled new machines and completed metal fabrication for projects for professors and students
- Trained students on and developed documentation for manufacturing equipment in the shop; advised students with their personal or school projects on fabrication and design

TECHNICAL SKILLS

Computer-Aided Design: SolidWorks, ProE, Creo, nTop, Element, Rhino, Inventor,

Software: Ansys, Materialize Magics, Photoshop, Illustrator, InDesign, Premiere, Microsoft Office, Google Suite

Coding Languages: Arduino, Python, HTML/CSS, JavaScript

Equipment: FDM and SLA 3D Printers, CNC Router, Laser Cutter, Horizontal and Vertical Band Saws, Drill Press, Jump Shear, Beverly Shear, Belt Sander, Grinder, Soldering Iron, Sheet Metal Bending, Sewing Machine, Embroidery Machine, Real3D Scanner