

# Gabriel Dobles

73 South Main St, Clinton, MA 01510 | 774-312-1066 | gabedobles42@gmail.com | <https://gabedobles.com>

## Work Experience

Sotax, Westborough, MA | Mechanical Engineer August 2022 – Present

- Develop innovative pharmaceutical sample preparation equipment, designing vessel carousel powertrain and tubing and glassware containers
- Overhaul powder friability tester to address tolerance stack ups and ease of use issues
- Redesign equipment cart optimizing geometries to prevent cross contamination moving between different powder rich environments
- Collaborate with production personnel and fellow engineers to create assembly and test fixturing
- Write and modify assembly procedures for new and existing products and for manufacturing clarity
- Remodel parts that predate current modeling software for functional and GDT redesigns
- Manage new and existing inventory finding equivalent physical and electrical components when necessary

Copia Scientific, Taunton, MA | Design Engineer June 2021 – July 2022

- Reverse-engineered lab equipment to enable refurbishment, specializing in liquid handlers
- Developed electrical prototypes and test rigs using Arduino
- Design custom tools and fixtures for both refurbishment shop and lab use
- Interfaced with new and existing vendors to provide new capabilities and source niche parts
- Managed in house 3D printing shop for prototyping and production needs

Novartis, Cambridge, MA | Laboratory Informatics and Automation (LXA) Co-op January 2020 – June 2020

- Collaborated with biologists and chemists on custom equipment for drug discovery research
- Managed dozens of independent engineering projects with multiple stakeholders such as lab managers and end users
- Lead product engineering from concept through design, prototyping, and implementation
- Designed and fabricated hardware for laboratory applications, using SolidWorks, 3D printing, and machining
- Modeled and improved automated and manual laboratory processes

Instron, Norwood, MA | Design Engineer – Sustaining Engineering Group (Co-op) January 2019 - June 2019

- Designed, documented, and tested a major rework of a lateral strain measurement device
- Collaborated with manufacturing and other engineers to understand recurring manufacturing issues and brainstorm possible solutions
- Redesigned production parts and assemblies using SolidWorks, documenting all new parts and design changes
- Drafted and revised engineering and assembly drawings
- Prototyped parts using inhouse 3D printing shop and outside machine shops

## Projects

Senior Capstone Project July 2020 – December 2020

- Developed a child-safe power tool from concept to final prototype as a member of a 5-person team

Personal 3D Printing October 2019 - Present

- Operate a home print shop with an FDM and an SLA printer
- Print miniatures for tabletop gaming and board game prototyping

## Skills & Abilities

- Applications: NX, SolidWorks, AutoCAD, MATLAB, Mathematica, Microsoft Excel, Visio
- Programming: C++, Java, VBA, CSS3, HTML5, Arduino, C#, JavaScript, Python
- Machining: Mill, Lathe, CNC Mill and Lathe

## Education

Northeastern University, Boston, MA May 2021

Master of Science in Mechanical Engineering (Concentration in Mechatronics)

- Honors: Dean's List, Honors College, Cum Laude
- Activities: American Society of Mechanical Engineers (ASME), Ultimate Frisbee Club, Robotics Club