Amanda Vasconcelos

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Education

Northeastern University, Boston, MA   2022
Bachelor of Science in Mechanical Engineering   GPA: 3.6
Honors: University Honors Program, Dean's List
Activities: Virtual Reality Club (Vice President), Roxbury Robotics

Engineering Skills

Applications: SolidWorks, OnShape, FEA (Various), GIMP, Visual Show Automation, Office Suite
Languages: Arduino, MATLAB, C++
Certifications: CSWP, ASME Geometric Dimensioning & Tolerancing Fundamentals
Shop Skills: 3D Printing, CNC, Laser Cutting, Bandsaw, Scroll Saw, Soldering, Drill Press, Hand Tools
Other Skills: FEA, DFM/DFA, Vendor Communication, Sourcing, Prototyping, Documentation

Work Experience

Cruz Foam, Santa Cruz, CA   October 2023 – Present
Mechanical Engineer, R&D
- Lead engineering of new extrusion die designs to move company from trial to customer production
- Iterated designs quickly by combining intelligent data analysis with rapid metal fabrication cycles
- Planned and executed implementation of original small-scale manufacturing equipment

Built Robotics, San Francisco, CA   July 2022 – Sept. 2023
Robotics Hardware Engineer
- Owned the CAD, design, and fabrication of large structural assemblies for use in construction automation
- Analyzed designs in FEA to inform material selection, improve function, and validate strength
- Worked within a small agile team to support existing products while developing new projects

Hasbro Inc., Pawtucket RI   January 2021 – June 2021
Mechanical Engineer Co-op, Animatronics
- Designed functional prototypes of new toys in CAD for in-house 3D printing and assembly
- Programmed servo models to mimic real-world animatronic toy behavior for testing and promotional use
- Collaborated with other co-ops to pitch two original toy concepts to company

SharkNinja Operating LLC, Needham, MA   January 2020 – June 2020
Robotics & Product Development Co-op
- Created original CAD using Creo for 3D printing and integration in the next generation of robotic vacuums
- Consulted with full-time engineers to address issues in previous products to create solutions for future releases

First Year Engineering Learning Center, Boston, MA   Sept. 2019 – May 2022
Engineering Tutor
- Operated laser cutter, 3D printer, and bandsaw to aid in construction of student projects
- Guided first year engineers through SolidWorks, AutoCAD, C++, Arduino, and MATLAB assignments

Personal Work

Animatronic & Robotic Systems   April. 2024 – Present
- Designed, printed, and programmed a toy to mimic the motion of a gyroid from Animal Crossing New Horizons
- Printed and troubleshooted parts of the Leonardo InMoov open-source full humanoid robot

Senior Capstone, Guitar Playing Robot   July 2021 – December 2021
- Created mechanisms in CAD to simplify mechanical and code complexity for strumming and string pressing
- Developed program in Arduino to control and time movements of stepper motors and servos using functions