Amanda Vasconcelos

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Mechanical Engineer | Robotics & Design | CAD - FEA - Prototyping

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

Mechanical Design: SolidWorks, OnShape, GD&T, Prototyping, DFM/DFA, FEA, CFD
Certifications: SolidWorks (CSWP), ASME Geometric Dimensioning & Tolerancing Fundamentals
Robotics: C++, Arduino, J1939, Servo Systems, Mechatronic Integration
Fabrication: 3D Printing, Laser Cutting, CNC Mill, Soldering, Shop Tools, Hand Tools
Other: Sourcing, Documentation, Visual Show Automation, Google Suite, Office Suite

Work Experience

Ocean Power Technologies, Richmond CA Jan 2026 – Present
Mechatronics Engineer, R&D

- Designed sheet-metal parts and worked with short lead time vendors for an autonomous boat charging dock
- Developed C++ control logic for actuators to modify boat width, validating actuator positions and lock states
- Selected materials and anti-seize solutions to mitigate corrosion and biofouling in marine environments

Cruz Foam, Santa Cruz, CA Oct 2023 – Nov 2025
Mechanical Engineer, R&D

- Engineered extrusion die assemblies using SolidWorks, FEA, and CFD to transition from trials to production
- Led mechanical design, sourcing, and prototyping of novel manufacturing equipment with electrical team

Built Robotics, San Francisco, CA Jul 2022 – Sept 2023
Robotics Hardware Engineer

- Owned the CAD, analysis, design, and fabrication of large-scale robots used in construction automation
- Applied FEA to optimize material selection and validate durability under heavy operating conditions

Hasbro Inc., Pawtucket RI Jan 2021 – Jun 2021
Animatronics Mechanical Engineer Co-op

- Designed functional prototypes of new animatronic toys in CAD for in-house 3D printing and assembly
- Programmed servo models to replicate real-world animatronic toy behavior for testing and promotional use

SharkNinja Operating LLC, Needham, MA Jan 2020 – Jun 2020
Robotics & Product Development Co-op

- Developed original CAD using Creo for prototyping and problem-solving the next generation of robotic vacuums
- Conducted consumer interviews to gather insights on real-world use to inform design decisions

Personal Work

Robotic & Mechanical Systems Apr 2024 – Present

- Designed, printed, and programmed a servo-driven toy gyroid from Animal Crossing New Horizons
- Printed and troubleshot mechanical assemblies of the Leonardo InMoov open-source full humanoid robot

Senior Capstone, Guitar Playing Robot Jul 2021 – Dec 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