

Anitez Gautam

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SUMMARY

Enthusiastic biomedical engineering senior with proven experience in mechanical design, prototyping, and developing validated test methods; passionate about applying these skills to robotics and complex electromechanical systems.

EDUCATION

University of Massachusetts, Amherst

Bachelor of Science, Biomedical Engineering

Dec 2026

GPA: 3.7

SKILLS

Mechanical Design & Analysis: SolidWorks (CSWA Certified), OnShape, FEA, Prototyping, Test Method Development, Root Cause Analysis, Design for Manufacturability, 3D Printing, CNC Machining, Assembly & Fixture Design, Mechatronics

Software & Programming: Python, Arduino, AWS, Excel, Minitab, Bluehill Universal

WORK EXPERIENCE

Apple, SoftGoods

Jan 2026 – Aug 2026

Manufacturing Design Engineer Intern

Cupertino, CA

- Served as DRI for 2 iPhone softgoods programs and supported 3 iPad softgoods programs, working across injection molding, lamination, and adhesive bonding processes for soft material components.
- Drove cross-functional engineering during NPI builds, performing root-cause analysis to resolve hardware blockers and implement corrective actions with suppliers.
- Architected and deployed "AppleCore," a centralized manufacturing data tool, across 8 product programs.
- Managed cost rollups, optimized material usage, and led cost-down engineering investigations that realized \$4.6M in savings.

Johnson & Johnson MedTech Surgery, Surgical Robotics Team

May 2025 – Aug 2025

Mechanical Engineering Intern

Santa Clara, CA

- Designed, prototyped, and evaluated a precision gearbox that powers the device-delivery system in a surgical robot..
- Developed and tested electromechanical fluidics delivery system, creating CAD models, proof-of-concept builds, engineering drawings, and work instructions to support a surgical robotic platform.
- Engineered mechanism to hermetically seal and couple a flexible robotic endoscope to the system, enabling multi-use of robot.
- Created quick-connect fiber optic mechanism that improved workflow efficiency by 99.7% and increased light output by 47%
- Authored and executed test methods to characterize steering performance of a flexible robotic endoscope in anatomical pathways, informing future prototype device changes.

Boston Scientific, Endoscopy R&D

Jul 2024 – Dec 2024

R&D Co-op

Marlborough, MA

- Developed automated anomaly detection system combining SolidWorks, Arduino, and AWS Lookout for Vision, reducing inspection time from 60 minutes to 2 minutes and saving \$5,000 annually per team.
- Designed force measurement test method using Bluehill Universal, SolidWorks, and Minitab for device characterization..
- Authored and submitted a technical disclosure for a novel device design, accepted by internal patent review board.

UMass MedTech Team, Medical Device Design Team

Sep 2022 – Present

President

Amherst, MA

- Scaled design team from 10 to 40+ students and brought in \$7,000 in funding, enabling four concurrent device projects.
- Mentored student engineers in CAD (OnShape), prototyping, and testing, fostering technical growth and project ownership.
- Directed mechanical design, testing, and validation activities across student teams to deliver clinically relevant device concepts

ENGINEERING PROJECTS

2 Stage Cycloidal Gearbox, Personal Project

July 2024 - Present

- Designed a two-stage cycloidal gearbox (143:1 reduction) in SolidWorks to power a robotic arm with a 10 kg payload capacity.
- Performed stress analysis on gear profiles and housing to evaluate torque transmission, and structural safety under load.
- Fabricated and assembled 3D-printed prototypes, iteratively testing and refining tolerances, bearing fits, and alignment
- Validated prototype performance through iterative testing, achieving smooth operation at target load.