

Matthew J Nielsen

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Full-time student pursuing a career in mechanical and biomedical engineering. Hands-on experience with nanomaterials, nanofabrication processes, and biomedical design. Passionate about applying technical expertise and leadership in medical device development and nanofabrication processes to improve lives.

EDUCATION

Brigham Young University, Ira A. Fulton College of Engineering

Apr 2028

B.S Mechanical Engineering (3.95 GPA)

WORK EXPERIENCE

BYU Physics Department – Nanomaterials and Fabrication

Apr 2025 - Present

Undergraduate Research Assistant

- Produced 100+ carbon nanotube samples using industrial furnaces, optimizing conditions for consistent growth.
- Handled chemicals using lab safety ethics while performing various chemical processes in the cleanroom.
- Developed a new process to create high precision micro gas chromatography column chips.

Outdoors Unlimited

Sep 2024 - Present

Bike Shop Manager, Ski Technician

- Coordinated repair workflow to ensure quality service for 10 customer bikes and 35 rental bikes weekly.
- Managed bike shop inventory including purchase orders for customers and shop.
- Trained 10 new technicians to perform repairs efficiently and effectively.

CSM Construction

May 2024 - Aug 2024

Construction Worker

- Performed steelwork, excavation, and operated heavy equipment such as skid steers, trench compactors, and loaders.
- Collaborated with team members to complete projects on schedule while maintaining safety standards.

SKILLS

- Engineering: CAD design (SolidWorks, Onshape), technical drawings, circuit analysis, dynamics, materials science, 3D printing, chemical handling, photolithography.
- Programming: Python, C.
- Analytical & Problem-Solving: Troubleshooting, optimization, system analysis, experimental methods.
- Languages: English (native), Spanish (fluent, spoken and written).
- Professional: Interpersonal communication, customer satisfaction, self-driven, disciplined, adept learner.
- Mechanical: bike repair, ski repair.

LEADERSHIP AND VOLUNTEER EXPERIENCE

Vice President and Engineering Officer, BYU 2 FT Prosthetics Club, BYU

October 2024 – Present

- Planned and mentored engineering design competition for 5 teams of 4 students.
- Facilitated a week-long humanitarian trip to the Dominican Republic to help build low-cost prosthetics for 25 patients.

Full-time volunteer, Church of Jesus Christ of Latter-Day Saints

May 2022 - May 2024

- Conducted monthly trainings for 150 volunteers to strengthen teaching skills, team unity, and leadership capacity.
- Engaged with 25 Latino individuals every day honing Spanish language skills and deepening cultural understanding.

REFERENCES

Available upon request.

