

BRYAN HILTON

Mechanical Engineering Undergrad at BYU

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OBJECTIVE:

Driven student and experimentalist with a love for solving diverse problems. Broad experience ranging from computer simulation and modeling to high voltage/high vacuum systems. Seeking opportunities to collaborate with a team in tackling challenging problems in any field, especially the nuclear energy sector.

EDUCATION:

Brigham Young University: Mechanical Engineering Major

Expected Graduation: April 2028

Current total credits: 109, Major GPA: 3.87

SKILLS:

- High Vacuum, High Voltage Systems
- Excel: Data Analysis, Statistics
- Arduino, Raspberry pi
- Solidworks: Modeling and Drafting
- Programming: Python (numpy), C++
- Measurement Electronics

EXPERIENCE:

Vacuum Technician for BYU Physics Department

July 2025 - Present

- Designed, assembled, and repaired high vacuum systems, pumps, and gauges
- Built and troubleshoot high voltage power supplies for a Paschen's Law demonstration
- Repaired and calibrated capacitance manometers and other analog electronics

BYU Rocketry Club / Aeronautics Club

2021 - 2025

- Used CAD, 3D printing, simulation, helped design payload delivery mechanism for the DBF team

Robotics Coach at Boys & Girls Club

Summer 2021

- Taught a youth class how to build and program their own robots
- Hosted a competition to allow them to test their designs

Project Experience:

- Built a high vacuum system and high voltage supply to investigate applications of the surface wakefield accelerator in proton therapy. Multi-year passion project involving precision measurement and computer simulation.
- Robotics: Made robots with LIDAR & raspberry pi, remote control and sensors with arduino, served as high school robotics club president.
- Worked on a team to track near-Earth asteroids and built computer simulations to predict trajectories for the MIT Summer Science Program in Astrophysics.

PERSONAL:

Grew up in NM and loves all things outdoors, hiking, running, tennis, music, and Mongolian language/culture.