

## EDUCATION

The Ohio State University, Columbus Ohio

Expected Graduation May 2026

Major: PHYSICS

Minor: Engineering Science

Relevant Coursework: Multidisciplinary Engineering Capstone Design, statics, Mechanics of Material, Machine Learning for Physicist, Experimental Physics Instrumentation and Data Analysis Lab, Intermediate Mechanics, Engineering Design, Electronic, Computational Physics

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## EXPERIENCE

HONDA BEV Infrastructure Capstone Project Engineer

August 2024-May2025

Honda Manufacturing of America Marysville Auto Plant (MAP), Marysville, OH

- Conducted battery testing to evaluate thermal runaway behavior in lithium-ion cells under controlled condition
  - Analyzed thermal, mechanical, and material response during failure scenarios using mechanics of materials and materials science principles
  - Developed Python-based data analysis scripts to process experimental test data, visualize trends, and support detection methodology evaluation
  - Worked directly with Honda's BEV Infrastructure Development Team and lead engineer to review test results and align engineering recommendations with manufacturing, safety, and infrastructure constraints
  - Evaluated sensor placement and early-warning detection strategies considering mechanical constraints, manufacturability, and system-level tradeoffs
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## Technical Skills

### Programming & Data Analysis

- Python (NumPy, Pandas, Matplotlib, scikit-learn)
- Jupyter Notebook (primary development environment)
- Data cleaning, feature engineering, CSV/Excel workflows

### Machine Learning

- Supervised learning (Regression, Random Forests)
- Model training, validation, and performance evaluation (MSE, MAE, R<sup>2</sup>)
- Applied ML for time-series and experimental datasets

### Engineering & Mechanics

- SolidWorks (parts and modeling)
- Statics and Mechanics of Material

### Experimental & Computing Tools

- Experimental data analysis
  - Data visualization (Matplotlib, Seaborn)
  - OSC HPC (Pitzer), Slurm
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## Honors, Awards and Scholarships

The Ohio State University Dean list- 2018

Alber Trust Fund scholarship



