Ethan Nakamura

MECHANICAL ENGINEERING INTERN

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Summary

Mechanical engineering student at Purdue with a current powertrain test internship and 2 years designing suspension parts for the Formula SAE team. Models parts in SolidWorks and AutoCAD, runs test data analysis in MATLAB and Python, and writes clear test reports in Word and PowerPoint with close attention to detail. Seeking a spring 2027 co-op term in product design or testing.

Skills

- **SolidWorks**
- **AutoCAD**
- **CAD**
- **MATLAB**
- **Python**
- **Excel**
- **PowerPoint**
- **Machining**
- **Problem-Solving Skills**
- **Attention to Detail**

Experience

Mechanical Engineering Intern 05/2026 - Present

Wabash Valley Powertrain Lafayette, IN

Summer internship in the gearbox test engineering group, extended part-time through the fall semester at 20 hours a week.

- Model 14 test fixture parts in SolidWorks and release shop drawings, cutting fixture lead time from 3 weeks to 9 days.
- Analyze vibration and temperature data from **60+** gearbox endurance runs with MATLAB scripts, flagging 4 bearings for teardown.
- Update 30 legacy AutoCAD layouts of test cells to current revisions, with a senior engineer checking every sheet.
- Write weekly test summaries in Word and present results in PowerPoint to a team of 8 engineers and technicians.

Suspension Design Member 09/2024 - 05/2026

Purdue Formula SAE West Lafayette, IN

Student design team building one open-wheel race car each year, from CAD models through hands-on machining and testing.

- Designed front uprights and bell cranks in SolidWorks, reducing unsprung mass by **1.2 lb** per corner.
- Machined 18 aluminum parts on manual mills and lathes, holding 0.002 in tolerances on bearing bores for the 2026 car.
- Built a Python script that turns 2,000 lines of shock dyno data into damping curves used at track tests.
- Coordinated weekly design reviews with 6 subsystem leads, tracking 40 open action items in Excel.

Education

Bachelor of Science 05/2027

Purdue University West Lafayette, IN

Mechanical Engineering

Certificates

Certified SOLIDWORKS Associate (CSWA) 2025

Dassault Systemes

OSHA 10-Hour General Industry 2025

OSHA Outreach Training Program