Kyle Magness

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EXPERIENCE

Design Release Engineer   June 2021 - June 2025

General Motors| Warren, Michigan

- Lead design release for Smallblock valve train components, ensuring precision in Billet Steel Camshafts, Roller Hydraulic Valve Lifters, Dynamic Fuel Management Oil Control Valves, and Push Rods.
- Managed, corrected, and updated DFMEA and PFMEAs to enhance part reliability and performance.
- Coordinated with multiple suppliers to fulfill prototype orders for large-scale engine dyno and vehicle test schedules.
- Root-caused and resolved part durability and warranty cost issues, including a fix for GM's 2nd highest warranty spend item.
- Ensured program timing adherence and developed new suppliers to mitigate tariff exposure.
- Led product development from concept to assembly line issue resolution.
- As a part of GM's TRACK program:
  - Worked in **Virtual Design, Development, and Validation Engineering** to refine thermodynamic models for electric vehicle range estimation and implemented new tools such as a vehicle coastdown simulation.
  - As an **Electrification Project Engineer**, designed and developed battery systems for novel applications and markets. I also implemented a novel battery lifespan estimation algorithm and thereby reduced material costs for an industrial energy arbitrage application by $50k/unit
  - As an **Issue Resolution Team Co-Chair**, troubleshooted and solved assembly plant issues, contributing to the successful launch of the [BrightDrop Electric Delivery Van](#), and 2024 Chevrolet Traverse.
  - As a **Battery Systems Development Engineer** organized and oversaw full-scale tests for Thermal Runaway Protection technologies. I implemented new strategies and designs for preventing thermal event propagation, contributing to safety gains for the Electric Hummer.
    - Directly interfaced with external companies to refine customer requirements and engineering specifications.

EDUCATION

Oregon State University   April 2021

B.S. Mechanical Engineering

Aerospace Engineering Focus

- Teaching Assistant for Engineering Computer Programming using MATLAB, providing troubleshooting and grading support while delivering supplemental lectures, successfully improving student passing rates.
- Hispanic Engineers Club

VOLUNTEERING

- **FIRST Robotics Mentor**   2021 - Current
  - Provided mentorship in mechanical design, electrical architecture, programming, and system integration for high school robotics teams 5901, 6566
- **Big Brothers Big Sisters Detroit**
  - Online tutoring for students in the Detroit Metro Area for math and sciences

SKILLS

- **CAD & 3D Design:** Siemens NX, SolidWorks, Fusion 360, Onshape
- **Programming:** MATLAB, Simulink, Python, Java, Arduino, Shell Scripting.
- **Hardware & Fabrication:** Lathe, Mill, CnC, Soldering, PCB Design
- **Software & Tools:** Adobe Suite, Microsoft Office Suite, Google Productivity Suite, Computer Troubleshooting (Windows, Linux)
- **Other:** General Class Amateur Radio Operator, Tripoli Rocketry Level 1 Certification

Linkedin:

https://www.linkedin.com/in/kyle-magness-engineer/

Portfolio website:

https://www.hopefuloverlook.casa/