Kyle Magness

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LinkedIn ı Portfolio - MATLAB & SolidWorks

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.
- Coordinated with multiple suppliers to fulfill prototype orders for large-scale engine dyno and vehicle test schedules.
- Managed, corrected, and updated DFMEA and PFMEAs to enhance part reliability and performance.
- 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 and 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 and implemented new strategies and designs for preventing thermal event propagation, contributing to safety gains for the Electric Hummer.

Estate Renovation Specialist September 2025 - present
Willamina, Oregon

- Full interior renovation of a 1934 construction Sears-Robuck kit home. 1600 sqft, 2 stories with a full basement.
- Completed an interior demolition with code-compliant disposal of hazardous material; the rework of all electrical and plumbing to 2026 IBC compliance. Addition of insulation in all exterior-facing stud wells, cutting heat loss by 73%. Interior floor plan re-engineered to maximize usable space and even heating. New kitchen layout and design, along with new appliances. Introduced sustainable forest management practices to control invasive species and re-establish native species of flowers, grasses, and Douglas Fir trees.

EDUCATION

Oregon State University April 2021
B.S. Mechanical Engineering
Aerospace Engineering Minor

- Teaching Assistant for Engineering Computer Programming using MATLAB, providing troubleshooting and grading support while delivering supplemental lectures, successfully improving student passing rates.
- Hybrid Propellant Rocket Team, Oxidizer tank design lead

SKILLS

- Tripoli Rocketry Level 2 Certification (TRA #19552)
- General Class Amateur Radio Operator
- **CAD & 3D Design:** Siemens NX, SolidWorks, Fusion 360, Onshape
- **Programming:** MATLAB, Simulink, Python, Java, Arduino, Shell Scripting, Julia
- **Hardware & Fabrication:** Lathe, Mill, CnC, Soldering, PCB Design, Electrical System Design
- **Software & Tools:** Computer Troubleshooting (Windows, Linux), Adobe Suite, Microsoft Office Suite, Google Productivity Suite
- **Mentorship: FIRST ROBOTICS** mentorship in mechanical design, programming, and system integration for high school robotics teams 5901, 6566; Online tutoring for students in the Detroit Metro Area for math and sciences

Linkedin:

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

Portfolio website:

https://www.hopefuloverlook.casa/