

Zach Robertson

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SUMMARY

Experienced Chassis Mechatronics Engineer with 2 years of experience at Schaeffler Group. Proficient in C++, Python, and MATLAB, with a strong background in troubleshooting, debugging, and both hardware and software development. Seeking new opportunities to apply expertise in developing advanced mechatronic systems and contribute to innovative projects in the automotive, aerospace, or renewables industries.

EXPERIENCE

Chassis Mechatronics Engineer | Schaeffler Group

June 2021 - August 2023, Troy, MI

- Designed, Implemented, Troubleshooted, and Iterated on brand new Industry prototype designs for future electric automotive market.
- Wrote software to precisely estimate steering rack forces within steer-by-wire systems, while aligning with stringent customer specifications.
- Coordinated with Suppliers and Manufactures on stringent timelines for the completion of specialized prototype parts.
- Spearheaded development on demonstration vehicle for the Detroit Auto Show (NAIAS 2023) and successfully brought project to fruition within strict time deadlines.
- Presented prototype vehicle to customers in order to secure \$10 million per year contracts to supply new vehicles.
- Piloted foundational architecture design for Battery Management System, in order to bolster product portfolio for EV Market.
- Explored risk and mitigation strategy for a global supplier of automotive sub-assemblies during the shift to Electric Vehicles (EVs) by examining Automotive Aftermarket sector. Uncovered possible areas of vulnerability by assessing ongoing research and development initiatives.

Obsolescence Engineer | Fives North American Combustion

June 2019 - January 2020, Cleveland, OH

- Established annual product volume metrics, while creating foundational reference for identifying product obsolescence triggers, including inventory levels and active customer engagement by employing in-depth analysis of customer sales data.
- Identified surplus parts no longer essential for inventory maintenance by analyzing Bill of Materials (BOM) along with authoring Engineering Change Notices (ECNs) to formalize and disseminate obsolescence directives throughout global organization.
- Achieved notable 15% reduction in comprehensive product portfolio by leading team of four in spearheading product obsolescence initiative.

EDUCATION

Bachelor of Science in Mechanical Engineering | Miami University of Ohio

Minor in Computer Science, 3.4, Oxford, OH, 2022

- Competed in NCAA Division 1 Cross Country and Track & Field while attending school.

PROJECTS

Chiller Plant Redesign

March 2020 - May 2020

- Evaluated two-decade expenses associated with diverse alternatives for Miami University's upcoming chiller plant, such as pipe dimensions, maintenance intervals, and distinct pump selections.
- Created sophisticated software solution for streamlined calculation of multivariable fluid mechanics equations, encompassing parameters, such as pipe dimensions, maintenance considerations, and more.

INVOLVEMENT

Team Captain | Miami University of Ohio | Cross Country and Track Teams

August 2020 - May 2022

- Spearheaded Team Meetings in order to bolster team culture and keep everyone aligned toward common goals.
- Organized the team to volunteer at the NIRCA Track and Field National Championships, with over 20 student volunteers from each event.
- As Team Captain, met with coaches and trainers to be a bridge of communication between Athlete and Coach, driving team to a conference title.

CERTIFICATIONS

C++ & Python | Codecademy

SKILLS

Javascript, HTML, Java, C++, Python, SQL, Git, XCode, Swift, MATLAB, Simulink, CAN, DSpace, Raspberry Pi, Arduino, PTC Creo, PTC Windchill, Microsoft Office, Autodesk Suite, Enterprise Architect, JIRA, EPLAN, Vehicle Spy, neoVI, Electrical Testing