

# Tirath Matharu

✉ [tirathmatharu@gmail.com](mailto:tirathmatharu@gmail.com) | [in linkedin.com/in/tirathmatharu](https://www.linkedin.com/in/tirathmatharu)

## Experience

- |  |                       |                         |                          |
|--|-----------------------|-------------------------|--------------------------|
| <b>Battery Program Manager - Battery Packs</b>   | <b>Stellantis N.V</b> | <i>Auburn Hills, MI</i> | <b>02/2024 - Present</b> |
| <ul style="list-style-type: none"><li>Managed all facets of STLA-Large BEV battery pack development, ensuring strict alignment with program targets in terms of cost, timing, quality, and performance.</li><li>Maintained comprehensive documentation on program status while overseeing product readiness for approved launches, establishing precise timing milestones for the seamless execution of multiple vehicle programs.</li><li>Led the proactive identification of program requirements and potential risks, facilitating the aggregation of cross-functional departmental insights and data to guide strategic decision-making.</li><li>Championed proactive risk mitigation initiatives in collaboration with Product Design Teams, Quality Managers, and Platform Teams, resulting in a reduction of project risks.</li><li>Delivered comprehensive weekly program status reports to senior management, offering transparent insights into project progression.</li></ul>           |                       |                         |                          |
| <b>Calibration Engineer - Driveability and Emissions</b>   | <b>Stellantis N.V</b> | <i>Chelsea, MI</i>      | <b>01/2020 - 02/2024</b> |
| <ul style="list-style-type: none"><li>Developed engine calibrations for LEV and SULEV emission standards compliance, enhancing driveability through effective use of DVPRs, meticulous test plans, and strategic utilization of desktop models.</li><li>Collaborated with base engine calibration and hardware release teams, utilizing on-site labs, test facilities, and vehicle groups to implement optimal design and calibration solutions.</li><li>Maintained a daily issues list tracker while adeptly debugging and resolving concerns across the mule vehicle fleet. Leveraged Hardware-in-Loop facilities to establish initial fleet calibrations, ensuring accuracy and efficiency in the calibration processes.</li><li>Experienced in data acquisition using ETAS (INCA), adept at data analysis, root cause identification, and resolution, while contributing expertise to feature development including Catalyst Heating, Transient Fuels, and Open/Closed Loop Fueling.</li></ul> |                       |                         |                          |
| <b>Design &amp; Release Engineer - Powertrain Adaptation</b>   | <b>FCA US LLC.</b>    | <i>Auburn Hills, MI</i> | <b>09/2016 - 01/2020</b> |
| <ul style="list-style-type: none"><li><b>Components:</b> <i>Electronic Throttle Bodies, Gasoline Direct Injectors, Port Fuel Injectors, DEF Injectors, and Secondary Air Systems</i></li><li>Developed system specifications and requirements, and ensured seamless integration of cross-functional aspects throughout the development process, from concept to production, for two systems: WGE Throttle Body and GME T6 DI Fuel System.</li><li>Collaborated extensively with Suppliers and Tech Leads, leveraging field-derived insights to enhance component quality documentation (DVPRs, DFMEAs, PF Specs, etc.), which resulted in reduced costs and improved performance.</li><li>Spearheaded supplier risk management projects, defining quality targets for warranty returns, and successfully executing cost-saving initiatives, resulting in savings of \$450K over two model years.</li></ul>   |                       |                         |                          |
| <b>Apprentice Engineer II - EMS&amp;C</b>  | <b>DENSO Inc.</b>     | <i>Southfield, MI</i>   | <b>02/2015 - 08/2015</b> |
| <ul style="list-style-type: none"><li>Assembled prototype Fuel Charging Assemblies for Ford's SV6 and V8 programs, ensuring compliance with technical specifications, and concurrently collected and analyzed end-of-line data to ensure compliance to specifications</li></ul>  |                       |                         |                          |

## Projects

- Formula SAE - Warrior Racing - President (1 year) and Brakes Captain (3 years)**
- Oversaw team progress for the season, coordinating preparations for two SAE competitions. Assigned weekly tasks to divisions, ensuring timely completion, and reported bi-weekly updates to the Faculty Advisors. Additionally, managed budget allocations for divisions, subsystems, travel, testing, and shop expenses.
  - Developed mathematical models using Vehicle Dynamic Equations to analyze braking forces and pressures in the brake system, while successfully designing (3D) and manufacturing Pedal Box Assemblies for three vehicle iterations, meeting all race-specific targets.

## Skills

**Programs** - Python | MATLAB/Simulink | Robot Operating System | SolidWorks (3D/FEA) | Unigraphics NX (3D)

**Shop Experience** - 3D Printing | Plasma Cutters | CNC Milling | Lathe (Turning) | Welding | General Fabrication

## Education

- |  |                      |                |
|--|----------------------|----------------|
| <b>Master's of Science, Mechatronics</b><br>Oakland University                 | <i>Rochester, MI</i> | <b>12/2024</b> |
| <b>Bachelor's of Science, Mechanical Engineering</b><br>Wayne State University | <i>Detroit, MI</i>   | <b>08/2016</b> |