Binila Fernando, EIT

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Master of Science in Engineering graduate with experience in **Product Engineering**. High interest towards **Product Development and Design Release**. Detailed-oriented self-starter and team player adept in both written and oral communications. Ability to lead while taking responsibility.

KEY SKILLS

- Product Engineering
- Design Release
- Lotus Notes
- DVP&R's
- CAD
- DFMEA
- Testing
- BOMs
- Microsoft Office Suite

EDUCATION

Master of Science in Mechanical Engineering
Kettering University | Flint, MI | 2018 | 3.6 GPA
Independent Study: Analysis of Root and Vane Expanders for Waste Heat Recovery
Coursework: Computational Fluid Dynamics, Hybrid Electric Vehicle Studies, Vehicle Systems Dynamics

Bachelor of Science in Aerospace and Mechanical Engineering
State University of New York at Buffalo | Buffalo, NY | 2015 | 3.1 GPA
Coursework: Modelling and FEA, Stress Analysis, Product design

EXPERINCE HIGHLIGHTS

HUTCHINSON FLUID MANAGEMENT SYSTEMS *(Tier 1 Automotive Supplier)**, Auburn Hills, MI***
Product Engineer (May 2017 – Present) | ***High Pressure Applications***

Responsibilities: Design and Release of High Pressure Fluid Transfer Products, including Air Conditioning and Transmission Cooling components, according to Automotive OEM requirements. Product Engineer for **GM**, **Ford**, **FCA**, and **Mercedes** high pressure products - **Quoting, Product Development, creating DVP&R's, DFMEA, Prototyping, and Testing**. Benchmarking and Researching on Asian OEMs and supporting **Heavy Truck AC Development** including **Volvo, Daimler, and Navistar**.

Achievements: **Trouble-shooted and Re-designed** an OEM design in a short period of time, as a new engineer, and gained company's respect. Renowned as a fast-paced detail-oriented engineer.

KETTERING UNIVERSITY, *Flint, MI*
Research Assistant (August 2016 – May 2017) | ***Waste Heat Recovery for Automotive Applications***

Responsibilities: Analyzed turbo-expanders that can be used to convert waste heat energy from engine to mechanical energy. **NX 9, 10**, and Pointwise software were used to refine the expander design while **Converge CFD and ANSYS CFX** software were used to analyze the fluid flow.

Achievements: Calculated the position of Vanes in a Vane Expander with respect to time – a task that was unable to fulfill by other graduate students.

STATE UNIVERSITY OF NEW YORK AT BUFFALO, *Buffalo, NY*
Undergraduate Research Assistant (Summer 2014 - Spring 2015)

Researched on **hydrokinetic energy generation** using ocean waves and currents. Determined effective means for generating hydrokinetic electricity and geographic locations that they can be applied.

GENERAL AUTO WORKS LTD, *Colombo, Sri Lanka*
Mechanical Engineer Intern (Summer 2013)

Refurbished automobile engine components of passenger and commercial vehicles. **Pressure-tested** engine heads with blown head gaskets to check for cracked areas and executed necessary repairs or replacements for the most functional resolution.

INNOVATIVE TUNING, *Buffalo, NY*
Automotive Engineer Intern (Fall 2012)

Utilized composite materials, especially carbon fiber, to build highly effective lightweight body components of a Mitsubishi Lancer to induce negative lift with minimal drag. Performed **FEA** using **Creo (Pro-E)** to identify root causes of damaged parts.

GRADUATE PROJECTS HIGHLIGHTS

Stress Analysis of Composite Structures (Kettering, 2017)
Composite materials were defined and assigned to structures using NX 10. Did FEA for stress and deformation and compared the behavior of Composite Glass Fiber and Composite Carbon Fiber with Rolled Steel.

Experimental Modal Analysis (Kettering, 2016)
A structural damage was detected by comparing the natural frequencies of the cracked structure and the original structure. Siemens LMS – Impact Test software was used to gather data find natural frequencies.