Shahrukh Riyaz

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Qualification Summary

A hard-working individual with a strong understanding of engineering fundamentals. Execution of complex projects using programs including SolidWorks, Inventor, AutoCAD, and strong communication skills. Mechanically inclined and excels in team environment.

Key Skills

- SolidWorks
- Inventor
- AutoCAD
- Microsoft Office
- Finite Element Analysis
- Additive Manufacturing
- MIG, SMAW & GMAW Welding
- Team Oriented
- Lathe & CNC

Work experience

Formula SAE uOttawa (OTTAWA, ON) — Jan 2018 – Aug 2019

Mechanical Engineering Student

- Designed and developed multiple SolidWorks models for possible chassis, speed linkages, suspension setups, steering systems, and various systems
- Understood combustion stoichiometry to optimize base engine parameters such as gasoline type, injection, ignition, and valve timing with respect to engine outputs such as power and torque.
- Conducted stress and FEA analysis on various components to evaluate design limitations
- Investigated failures and initiated testing of subsystems, assemblies, and components
- Researched cost-effective composites, metals, adhesives, and manufacturing methods
- Utilized CFD software to design aerodynamic body panels
- Coordinated weekly meetings to address areas involving project costs, schedules, and planning
- Prepared engineering documentation to deliver presentations to peers and team sponsors

Highlights:

- **Boosted performance by 7%** after designing an air intake to maximize airflow to engines
- **Achieved a 15% weight reduction** by fabricating molds and manufacturing composite body panels

Education

University of Ottawa *(Ottawa, ON)* *Sept 2015 – Aug 2020*

Bachelor of Applied Science in Mechanical Engineering

Notable projects

Capstone Project – MSVS SEV Field Kitchen | Department of National Defense | Ottawa, ON

- Redesigned a 20' ISO deployable container that will function as a Field Kitchen, providing support for military forces operating under a varying range of environmental and tactical conditions
- The Initial infrastructure consist of a 3-in-1 expandable shelter that has two wings and each soft wall has two zipped operated doorways
- Developed and redesigned more powerful HVAC system and parametrized the design by linking MATLAB and SolidWorks to scale the size and type of the Air-Conditioner and Heater required when number of personnel, wind speed, and altitude changes
- Communicated with the client regularly with regards to the design process and cost analysis
- Successfully completed the project with all given specifications and under the budget given by Department of National Defense

Manufacturing Wheel Covers using additive manufacturing methods

- Manufactured Wheel Covers for cars using additive manufacturing method
- Analyzed advantages and disadvantages of using this process and creating economical model along with business plan to test if the idea is profitable
- Researched various processes and used SolidWorks to design the final variant
- Ensured that all models were 3-D printed and tested using a miniaturized 3-D printer

Extracurricular activities

Indian Student federation (Ottawa, ON) Feb 2019 – April 2020

Vice-President

- Keeping financial records up to date and preparation of general budget.
- Co-Chair all meetings and have signing authority for the club.
- Represent University of Ottawa in outside organizations

References available upon request