JAKE JOSEPH

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EDUCATION

McMaster University, Hamilton, ON September 2014 - May 2019
Mechanical Engineering (B.Eng)

WORK EXPERIENCE

Husky Injection Molding Systems July 2019 - Present
Mechanical Design Engineer

- Applying knowledge of NX, GD&T and mechanical design to further develop Husky's injection systems

Husky Injection Molding Systems May 2017 - August 2018
Mechanical Design Engineering Intern

- Spearheaded three critical projects which resulted in customer retention and a projected annual savings of over $100k
- Investigated and resolved machine related field service issues through in-depth root cause analysis
- Applied GD&T through detailed engineering drawings as per functional requirements
- Executed conceptual and detail design of parts and assemblies using NX
- Developed test plans and designed test stands as required.
- Composed technical documents and gave regular presentations to engineering teams and management.
- Managed own projects and schedule to ensure deliverables were completed in a timely fashion

ENGINEERING EXPERIENCE

MAC Formula Electric Team - Formula SAE January 2017 - April 2017
Aerodynamics

- Worked with a small team of students to conceive and design the aerodynamics package for the 2016 McMaster Formula Electric race car.
- Designed a multi-element rear wing using previous Solidworks models to meet new rule regulations.
- Performed Computational Fluid Dynamics simulations on various airfoils and determined the ideal airfoil shape to be used in the construction of the rear wing based on velocity and pressure distributions.
- Conducted Failure Mode and Effect Analysis on the full car to determine possible failure scenarios and how to mitigate these failures.
- Implemented knowledge of Finite Element Analysis to calculate loads and stresses experienced on the rear wing mount so that the design can account for these deformations.
- Manufactured the rear wing using carbon fiber reinforced plastic for a lightweight yet strong solution.

ENGINEERING PROJECTS

McMaster University / Mold-Masters September 2018 - April 2019
Adjustable and Anti-Rotation Valve Pin - Senior Project Course

- Worked with three other Mechanical Engineering students to design an Adjustable and Anti-Rotation Valve Pin for external depth adjustment without disassembly.
- Followed the entire product development process and company standards to deliver a working prototype

HOBBIES

Photography Fitness