Taha Malik

Mechanical Engineering Student

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Skills Overview

Mechanical
GD&T, Drafting, Tolerance Analysis, SolidWorks, Inventor, AutoCAD, FEA, CATIA, Simplify3D

Software
Java, VBA, C++, MATLAB, LaTeX, PowerApps, Android Studio, RobotC, HTML/CSS

Hardware
Arduino, Motors (specialty in BLDC), Soldering, Rapid Prototyping, Power Tools, CAN

Manufacturing
DOE, RCA, Kaizen, APQP, Six Sigma, FMEA, SPC, Lean Manufacturing, 5S, PPAP

Experience

Bionik Labs, Toronto ON – *Hardware Engineer* 2019 (Sept-Dec)

- Developed and executed motor test plan to grade BLDC motors based on performance in saturation current, temperature, cogging torque, inrush current, efficiency, and other criteria under 60601
- Designed outrunner motor adapters and completed FEA in SolidWorks to ensure parts passed under the load condition as well as created drawings and communicated with suppliers to ensure accurate parts
- Programmed accelerometer to output Fourier transform to categorize motor's dominant frequency
- Built mobile electro-mechanical system that simulates therapy robot for design evaluation and testing

Skill Development: Product Design, Design of Jigs/Fixtures, CAD Modelling, Medical Device Standards

Tesla Motors, Fremont CA – *Quality Engineer* 2019 (Jan-Apr)

- Completed Root Cause Analysis to rectify quality issues on Model 3 and used PowerApps to introduce alert system improving cycle times and throughput rates by 25%
- Designed and fabricated sealer application attachments to improve sealer quality on all Tesla vehicles saving $11,000 yearly
- Eliminated all oil defects by following DOE principles and performing FTIR testing to identify and remove defect source
- Created Java program allowing operators to input defects and drive Continuous Improvement initiatives
- Implemented Kaizen methodologies to improve sub-assembly process and executed lean tools to determine corrective actions on quality issues for Model 3, S, X & Y

Skill Development: Problem Solving, Manufacturing Fundamentals, Mechanical Enclosures

Mitchell Plastics, Waterloo ON – *Project Engineer* 2018 (May-Aug)

- Managed injection moulding process for Toyota Rav4 interior automotive parts by training workers, preparing materials, designing packaging, and validating assembly procedures
- Identified and eliminated quality issues by creating and presenting CAD solutions to tool shops for die alterations
- Streamlined machine trial and warehouse space management process by automating program summary using VBA allowing 50% more part storage
- Developed quality plans to test non-conformances in supplier parts and communicated/resolved SCAR issues

Skill Development: Project Management, Product Launch, Plastic Manufacturing, Supplier Management

Education

University of Waterloo, Waterloo ON Mechanical Engineering w/ Biomechanics Specialization
Candidate for Bachelor of Applied Science, 2021