


# Taha Malik

## 3B Mechanical Engineering

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## Experience

### **Bionik Laboratories – Hardware Engineer** Sept-Dec 2019

- Collaborated with Industrial Design team to develop electro-mechanical prototype of stroke therapy robot used in design evaluation and testing
  - Designed motor components, completed FEA in SolidWorks and communicated with suppliers to ensure accurate parts
  - Developed test plan to grade BLDC motors and categorize based on performance under medical grade safety standards (IEC 60601-1)
- Skill Development: Product Design, CAD Modelling, Medical Device Standards

### **Tesla Motors – Quality Engineer** Jan-Apr 2019

- Completed Root Cause Analysis to rectify quality issues on all Tesla models
  - Introduced defect tracking Java app to gain visibility on throughput rate
  - Used Continuous Improvement principles to decrease cycle times by 25%
  - Eliminated oil defects by performing FTIR tests to identify source of issues
  - Designed and fabricated sealer quality tools saving \$11,000 annually
- Skill Development: Problem Solving, Manufacturing Fundamentals

### **Mitchell Plastics – Project Engineer** May-Aug 2018

- Managed injection moulding process for 2019 Toyota Rav4 by training workers, designing packaging, and validating assembly procedures
  - Formed part storage and purge system to better utilize warehouse space
  - Used VBA to streamline machine trial process from program summary
- Skill Development: Project Management, Plastic Manufacturing

### **Linergy Mfg, Linamar – Manufacturing Engineer** Sept-Dec 2017

- Increased production efficiency by following GD&T to 3D model gauges, tools, fixtures, and custom tools for shop floor
- Fabricated components for welding, stamping, and milling processes
- Designed and drafted manufacturing process for Honda hypoid and driven shaft from raw forging
- Skill Development: Metal Manufacturing, Product Launch

## Education

### **University of Waterloo – Mechanical Engineering** Sept 2016 – Apr 2021 Candidate for Bachelor of Applied Science

- Specialization in Biomechanics
- Focus in Machine Design and Solid Mechanics

## Interests

Environmentally Sustainable Technologies, Medical Devices, Product Design and Research, Basketball, Fitness, Reading, Photography

## Skills

### **Mechanical & Design**

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

### **Hardware**

Arduino, Motors (Brushless DC), Soldering, Rapid Prototyping, Machine/Power tools, CAN

### **Manufacturing**

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

## Projects

### **Electric Bike Conversion**

- Used Arduino, throttle, DC motor, and e-brakes to convert regular bike into fully electric
- Mounted custom dual freewheel system allowing multiple input methods (pedalling, motor, or both)

### **Custom 3D Printer**

- Used online and text resources to build functional 3D printer (from scratch)
- Modified community source code to work with printer

### **Android App Development**

- Developed Harry Potter “World Exploring” app with over 10,000 downloads
- Created fitness app to track user progress, read/write to disk, and suggest workouts