Paavan Raj

Mechatronics Engineering Student

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WORK EXPERIENCE

Production Engineer Co-op
Minus Forty Technologies Corp.

05/2018 – 08/2018

Commercial Refrigeration Products Manufacturer

Achievements/Tasks

- Increased production capacity by 15% by aggregating smaller processes
- Assembled and analyzed prototype models for ease of manufacturing
- Practiced troubleshooting of refrigeration systems and equipment

Contact: Aaron Pitts – Aaronp@minusforty.ca

Quality Assurance Co-op
M&R Automation Canada

05/2016 – 08/2016

Industrial Automation Solutions Manufacturer

Achievements/Tasks

- Assembled, installed and tested electromechanical sub-assemblies and documented issues with design
- Ensured tolerance of machined parts met ISO 9001 standards
- Used Solidworks and E-reader to determine ensure fabricated part will function as intended
- Documented and quarantined defective parts for follow up with suppliers
- Machined new parts and corrected parts with minor defects

Technical Associate Assistant
M&R Automation Canada

07/2015 – 08/2015

Industrial Automation Solution Manufacturer

Achievements/Tasks

- Liased between manufacturing manager and mechanics
- Organized and tracked parts used in automation line by cell and assembly numbers
- Performed precision measurement and geometrical analysis on parts before assembly

CERTIFICATES

Certified Solidworks Simulation Associate (03/2018 – Present)
Certified as being proficient in Solidworks Simulations

Certified Solidworks Associate (03/2017 – Present)
Certified as being proficient in Solidworks

Metal and Wood Shop Training (04/2016 – Present)
Trained to use metal and wood working machines

EDUCATION

Mechatronic Engineering (BESc)
Western University

09/2015 – Present *3.5 GPA*

Courses

- Mechatronics Systems Design
- Programming Fundamentals
- Control System Theory
- Circuit Analysis and Design

SKILLS

Leadership | Communication | Collaboration | Creativity | Flexibility | Continuous Learning | Problem Solving | Dedication | Adaptability

TECHNICAL SKILLS

Computer Aided Design
Solidworks, Finite Element Modelling, Stress-Strain Analysis, Heat Transfer, Eagle

Programming
C++, Java, OpenCV, p5.js, Object-Oriented Programming, Assembly

Prototyping
Soldering, Electrical Circuit Debugging, Milling, Lathing, Control System Modelling, Arduino

Engineering Design
Iterative Design and Testing, Version Control, Critical Path Planning, Failure Modes and Analysis

PROJECTS

Hex - Data Drone (09/2019 – Present)
- Autonomous drone with an Arduino flight controller
- Used for data acquisition and algorithm testing for Western's Aerodesign team using an onboard Raspberry Pi

Stark - Mobile Robot (03/2017 – 04/2017)
- Designed fully autonomous and robust robot capable of locating and lifting magnetic cubes using an Arduino microcontroller

Jarvis - Line Following Robot (02/2017)
- Successfully followed line using Arduino microcontroller and libraries to control motors, servos and encoders