Mohamd Imad

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Technical Skills

Languages: Python, MATLAB-Simulink, SQL
Technologies: Linux, Git, Pandas, Numpy, Matplotlib, Scikit learn

Experience

General Motors of Canada **Ontario Canada**
Vehicle System Diagnostics and Controls Calibration Software Engineer **Feb 2023 – Present**

- Continuously building automation tools via Python to optimize the working process of engineers.
- Developed a post processing tool in Python for analyzing the results of the J1699 compliance test which is a governmental regulatory requirement for production vehicles, resulting in over 80% efficiency increase.
- Leading a Python based automation project that automates the HIL bench diagnostics testing, resulting in a 90% decrease of engineers time on the HIL benchs.
- Responsible for the Body Control Module (BCM) software calibration of over 15 vehicle programs.
- Utilizing classification machine learning models to optimize the calibration of multiple vehicle programs resulting in over 15% efficiency increase.

Controls and Diagnostics Test Software Engineer **Apr 2022 – Feb 2023**

- Built multiple process improvement tools via Python to improve the process flow and reduce testing setup time, resulting in over 40% decrease in setup time for testing engineers.
- Responsible to conduct the testing and diagnostics of Diagnostics Trouble Codes (DTCs) in HIL benches (PHS/SCALEXIO) and in pre-development And production approved vehicles for the Body Control Module (BCM).
- Responsible to develop test plans for vehicle On Board Diagnostics (OBD) and conduct testing using Vspy3.

Castelar Tool and Grinding **Ontario Canada**
Tool Design Engineer **Aug 2021 – Apr 2022**

- Developed multiple temples for custom made cutting tools using VB's ilogic feature in Autodesk Inventor, resulting in 80% decrease cutting tools development time.
- Prepared detailed engineering drawings for the various manufacturing stages cutting tools must undergo to be manufactured.

University of Ontario Institute of Technology **Ontario Canada**
Research Assistant **Sept 2018 – Jun 2021**

- Developed a novel numerical model that analyzed cutting inserts of indexable milling tools using ABAQUS/Explicit solver. The model was validated against experimental testing results.
- Employed Python to perform EDA on the captured experimental cutting forces data. Then, employed Python to create multiple scripts that calculated cutting forces analytically.

Siemens Canada **Ontario Canada**
Industrial Engineering Intern (Co-op) **May 2017 - Aug 2017**

- Built a user friendly time estimation tool via Python that production supervisors can use to analyze their employees efficiency to maximize production quality and minimize defects.
- Collaborated with production supervisors, engineers and floor employees to create various plants layouts in AutoCAD to support the plant's manufacturing departmental layout changes.

Process Engineering Intern (Internship) **May 2015 - Aug 2016**

- Conducted time and cost studies on bottleneck departments, while supervising engineering students.
- Analyzed the data from the time studies and created a manufacturing time calculator for production supervisors to use to allocate the correct time for the production of different parts.

Education

University of Ontario Institute of Technology
Masters of Applied Science in Mechanical Engineering ***Ontario, Canada***

University of Ontario Institute of Technology
B.Eng (Honours) in Manufacturing Engineering ***Ontario, Canada***