

MOHAMD IMAD

Mississauga Ontario, Canada

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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

- Leveraging Python to continuously build automation tools that optimize the workflow of engineers, resulting in increased productivity and efficiency.
- Developed a Python-based post-processing tool for analyzing results from J1699 compliance tests, a regulatory requirement for production vehicles, achieving an 80% increase in efficiency.
- Leading a high-impact Python-based automation project to automate HIL bench diagnostics testing, resulting in a significant 90% decrease in engineers' time spent on HIL benches.
- 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 Python-based process improvement tools, reducing testing setup time by over 40% and optimizing process flow.
- Conducted Diagnostics Trouble Codes (DTCs) testing and diagnostics in HIL benches (PHS/SCALEXIO) and pre-development/production vehicles for the Body Control Module (BCM).
- Developed test plans and performed vehicle On Board Diagnostics (OBD) tests using Vspy3.

Castelar Tool and Grinding

Ontario Canada

Tool Design Engineer

Aug 2021 – Apr 2022

- Leveraged Autodesk Inventor's iLogic feature and VB programming to develop multiple templates for custom-made cutting tools, achieving an impressive 80% reduction in development time.
- Created detailed engineering drawings for various manufacturing stages of cutting tools, utilizing data visualization techniques to ensure accuracy and consistency throughout the manufacturing process.

University of Ontario Institute of Technology

Ontario Canada

Research Assistant

Sept 2018 – Jun 2021

- Developed a numerical model with ABAQUS/Explicit to analyze indexable milling tool inserts. Validated the model with experimental results for improved milling process accuracy and efficiency.
- Employed Python for EDA and to create scripts for analytical cutting force calculation, enhancing accuracy and processing speed of captured experimental data.

Siemens Canada

Ontario Canada

Industrial Engineering Intern (Co-op)

May 2017 - Aug 2017

- Developed a Python-based time estimation tool for production supervisors to analyze employee efficiency, optimize production quality, and minimize defects.
- Supervised engineering students in conducting time and cost studies on bottleneck departments.

Process Engineering Intern (Internship)

May 2015 - Aug 2016

- Collaborated with cross-functional teams to create plant layouts in AutoCAD to support manufacturing departmental layout changes.
- Analyzed data and created a manufacturing time calculator for production supervisors to allocate correct production time for 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