

MOHAMMAD HOUKAN

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OBJECTIVE

Mechanical Engineer with advanced academic and professional experience, specializing in 3D modeling, 3D printing, and programming. I aim to contribute to cutting-edge Artificial Intelligence projects, leveraging expertise in Python, machine learning, and data analysis to build innovative solutions. Proficient in integrating engineering principles with programming to deliver scalable and precise outcomes.

SKILLS AND ABILITIES

- Programming Languages: Python (including Pandas, NumPy, scikit-learn), C/C++, Ruby, Java
- AI/ML Skills: Machine learning model development, data preprocessing, and feature engineering
- Data Analysis Tools: Excel (Pivot Tables, VLOOKUP), MATLAB, Python libraries
- Software Proficiency: SolidWorks, SketchUp, Rhino(grasshopper), AutoCAD, OpenFOAM, MATLAB
- Professional Experience: Production management, prototype development, data analysis, MEP engineering
- Languages: Fluent in English and Arabic; currently learning Dutch

EXPERIENCE

Nabina Kitchen and Door Factory, Asst Production Manager

September 2022-June 2024

Oversee production and deliveries, track production schedules, automate design with Ruby and SketchUp, digitize order tracking systems, ensure quality control, optimize resources, lead and train staff, and implement process improvements

Qatar University, Research Assistant

June 2018-August 2022

Developed prototypes and conducted data analysis for projects on 3D printing, sensor technologies, and autonomous driving. Authored publications on cardiac health prediction and 3D/4D printing. Contributed to the design and testing of embedded sensors for atmospheric CO2 monitoring. Collaborated on biometric sensor technology projects, leading to award-winning innovations. Used SolidWorks and Rhino extensively for building 3D models. Utilized Python extensively for data analysis and algorithm development in research projects.

Al Jaber Contracting, MEP Engineer

July 2017- May 2018

Supervised installing and maintaining mechanical, electrical, and plumbing (MEP) systems for construction projects. Ensured compliance with industry standards and regulations. Utilized AutoCAD for project planning and documentation. Coordinated with on-site teams and contractors to ensure timely project completion and optimized system performance.

Delta Corporation, Mechanical Engineering intern

Jun 2016- Aug 2016

At Delta Corporation, I supported manufacturing of valve and pipe fittings and oil-well equipment. I gained practical knowledge in manufacturing processes, emphasizing production workflow and quality control. I enhanced my skills in industrial equipment assembly and implemented safety and efficiency protocols. I also assisted in field installations, testing, and servicing of wellhead equipment and x-mas trees onshore and offshore. My offshore experience included equipment installations and servicing on oil rigs, ensuring operational efficiency and safety through coordination with on-site teams.

PROJECTS AND ACHIEVEMENTS

Microsoft Imagine Cup Winner – Qatar

Developed award-winning biometric sensor technology.

Autonomous Driving Research

Contributed to developing an uncertainty-based adversarial test input generation methodology for robust deep learning (DL) models in autonomous driving.

EDUCATION

Sydney University

July 2024 – Current

PhD in Mechanical Engineering

Qatar University

September 2018 – December 2020

MSc in Mechanical Engineering

Qatar University

September 2012 – June 2017

BS in Mechanical Engineering