

HAMED AL SUBHI

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Professional Summary

A motivated Mechanical Engineer with expertise in mechanical design, thermal systems, and optimization. Experienced in supporting research and conducting experiments, managing engineering laboratories, and utilizing advanced tools like SolidWorks, MATLAB, and ANSYS. Currently working with the Mechanical and Industrial Engineering Department at Sultan Qaboos University, contributing to research and laboratory management.

Education

Florida Institute of Technology

Aug 2019 – Dec 2023

Bachelor of Science in Mechanical Engineering, GPA 3.64

Melbourne, FL

Relevant Coursework: Energy Convesion, Design Machine Elements, Thermal System Design, Project Engineering

Certifications

- AI Product Manager, Udacity, 2024
- AutoCAD, Excellence and Creativity Institute, 2024

Work Experience

Sultan Qaboos University, College of Engineering

Dec 2024 - Present

Mechanical Engineer B

SolidWorks, AutoCAD, ArtCAM, Matlab, CNC, 3D Printing

- Supporting the academic staff and students in conducting research and running experiments.
- Involved in managing the laboratories of mechanical and industrial engineering department, including thermodynamics, heat transfer, properties of materials, and computer integrated manufacturing.

Al Maha Petroluem

Oct 2024 - Dec 2024

Maintenance and pump engineering Intern

Excel, Machine Shop

- Conducted maintenance and troubleshooting on fuel dispensers and submersible turbine pumps, ensuring operational efficiency and reliability at multiple Al Maha fuel station

Engineering Wing at RAFO

Jul 2024 - Sep 2024

Mechanical Engineering Intern

Excel, Machine Shop

- Operated and troubleshot Aircraft Support Equipment, including Ground Power and Hydraulic Power Units, following international maintenance standards.
- Assisted in C-130 H turboprop engine and airframe maintenance, conducting NDT inspections.

Projects

Cost-Driven Optimization using GA to Design PCM-Thermal Energy Storage | MATLAB, EES

Dec 2023

- Achieved 32 percent cost reduction in cooling system when integrating it with hydrated salt PCM-based thermal energy stoarge, outperforming traditional ice-based TES in energy-saving and cost-efficiency
- Developed a preliminary optimization framework using Genetic Algorithm for TSE-based cooling system design selections, balancing performance and environmental impact by incorporating CO2 emissions considerations

Senior Design I and II –Formula SAE | SolidWorks, Ansys Mechanical, Ansys Fluent, EES, CREO

May 2023

- Elevated thermal resistance by 19 percent in firewall design through meticulous material evaluation, selecting E-glass for its superior performance in meeting stringent competition regulations
- Spearheaded aerodynamics sub-team, leading strategic design modifications through comprehensive CFD analysis using ANSYS Fluent and SolidWorks, culminating in a 31.56 percent increase in front downforce and a lift-drag coefficient improvement to 0.47

Organic Rankin Cycle based Heat Recovery System | EES

April 2023

- Modeled an Organic Rankin Cycle system for exhaust heat recovery in heavy-duty trucks, achieving a 14.56 percent thermal efficiency through optimal working fluid selection and advanced cycle parameter optimization.

Heat Recovery System for Jacuzzi | MATLAB, EES

Dec 2022

- Innovatively designed a tube-in-tube heat exchanger for Jacuzzi water preheating, achieving 40 percent power savings and demonstrating proficiency in optimization under constraints

Technical Skills

Software: SolidWorks, AutoCAD, MATLAB, SIMULINK, ANSYS Structure (FEA), ANSYS Fluent (CFD), Mechanical APDL, EES, eQUEST, Arena Simulation, ArtCAM, MasterCAM, RDWorks8

Fabrication: CNC Router, CNC Laser, Machine Shop Expertise, 3D Printing, 3D Scanning