Ahmad Hijazi
Mechanical Engineer

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Byblos, Lebanon

EDUCATION

Master of Science in Mechanical Engineering
Lebanese American University

09/2021 - 08/2023   *Byblos, Lebanon*

Bachelor of Engineering in Mechanical Engineering
Lebanese American University

09/2017 - 06/2021   *Byblos, Lebanon*

WORK EXPERIENCE

Graduate Research Assistant
Lebanese American University

09/2022 - 06/2023   *Byblos, Lebanon*
Research assistant for a project titled " Business model development and technical design of shared renewable energy systems in urban areas"

Tasks
- Managed cross-functional teams to ensure coordinated progress on the project
- Provided technical support to the hardware team working on connecting smart meters and data concentrators
- Utilized MATLAB to simulate peer-to-peer energy trading model

Graduate Research
Lebanese American University

09/2021 - 06/2023   *Byblos, Lebanon*

Tasks
- Investigated the effect of using dynamic deforming blade on the performance of Vertical Axis Wind Turbines
- Modelled and simulated the turbine on Ansys Fluent using User Defined Functions (UDF) and Dynamic Mesh
- Improved the Power Coefficient Cp of the turbine by 32%

Internship at Atalian Switch Group Company
worked in the Facility Management Department

07/2020 - 09/2020   *Beirut, Lebanon*

Tasks
- Performed preventive and corrective maintenance
- Used a Computer based Maintenance System(CMMS) to manage daily work processes
- Provided technical support during site visits with technicians

PUBLICATIONS

- Hijazi, A., ElCheikh, A., & ElKhoury, M. (2023). "Numerical Investigation of the use of Flexible Blades for Vertical Axis Wind Turbines".
Energy Conversion and Management
https://doi.org/10.1016/j.enconman.2023.117867

- Adbdelnour, V., Geagea, T., Hijazi, A., & El Ghossein, N. (2023). "Energy Management Model Suitable for the Lebanese Case".
6th International Conference on Renewable Energy for Developing Countries (REDEC). https://doi.org/10.1109/redec58286.2023.10208196

SKILLS

Ansys   MATLAB   SolidWorks   LabVIEW   Java
Python   C++   AutoCAD   SpaceClaim
Microsoft office   HTML   CSS   Tecplot

PROJECTS

Rubik's Cube Solver (04/2019)
- Developed a Rubik's Cube solver using LabVIEW and controlled it via a Myrio Controller

Solar Tracker (11/2019)
- Implemented a solar tracker utilizing a PID controller programmed in LabVIEW to optimize solar panel orientation

Finite elements method projects (03/2020)
- Developed MATLAB codes to solve one dimensional heat conduction equation and to perform truss structure analysis using finite elements method

Computational Fluid Dynamics projects (11/2020)
- Developed MATLAB codes to solve numerically the advection, diffusion, advection-diffusion, burgers, and Navier-Stokes equations
- Analyzed the stability of using various spatial discretization and time integration methods

Solar Desalination Systems (11/2020 - 05/2021)
- Designed and simulated conventional and inverted absorber solar stills, along with solar stills incorporating phase change material (PCM), as a Final Year Project.

Renewable Energy Project (04/2022)
- Designed an integrated renewable energy system combining hydro and floating PV panels for application on the Mseilha Dam in Lebanon

ACHIEVEMENTS AND CERTIFICATES

Graduate Program Scholarship (09/2021 - 08/2023)
A full Scholarship for graduate studies at the Lebanese American University

University Scholarship Program (09/2017 - 06/2021)
A full Scholarship by USAID at the Lebanese American University

SolidWorks Certification (CSWA) (10/2018)
Dassault Systemes (3DEXPERIENCE Certification Center)

LANGUAGES

English
Full Professional Proficiency

Arabic
Native or Bilingual Proficiency