Ahmad Hijazi

Mechanical Engineer

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Byblos, Lebanon

EDUCATION

Master of Science in Mechanical Engineering
Lebanese American University
09/2021 - 07/2023 *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 entitled " 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
- Utilized MATLAB for simulation of peer-to-peer energy trading model

Graduate Research
Lebanese American University
09/2021 - 06/2023 *Byblos, Lebanon*

Tasks
- Worked on improving the Power Coefficient of Vertical Axis Wind Turbines
- Modelled and simulated a Vertical Axis Wind Turbine on Ansys Fluent
- Investigated the effect of using dynamic deforming blade on the performance of the turbine

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

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

- Hijazi, A., El Cheikh, A., Hijazi, A., & El Khoury, M. (2023). Numerical Investigation of the use of Flexible Blades for Vertical Axis Wind Turbines. (In Progress)

SKILLS

Ansys | MATLAB | SolidWorks | LabVIEW | Java | Python | C++ | AutoCAD | Spaceclaim | Microsoft office | HTML | CSS

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 - 07/2023)
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