Rami Haidar

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EDUCATION

American University of Beirut (AUB), Beirut, Lebanon   September 2017 - Present
Bachelor of Engineering (BE) in Mechanical Engineering
GPA: 3.2

Le Lycée National, Beirut, Lebanon   September 2015 – May 2017
Lebanese Baccalaureate: General Sciences (Emphasis on Math and Physics)
GPA: 80.18/100

EXPERIENCE

Middle East Airlines (MEA), Beirut, Lebanon   January 2020 – February 2020
Aircraft Maintenance Trainee

- Deepened my knowledge in different fields such as thermodynamics, fluid dynamics, and electrical system engineering through a training program on aircraft dynamics, systems, and maintenance.
- Inspected the maintenance and testing operations responsible for tool calibration, jet engine, composite materials, and non-destructive testing.
- Examined different mechanical, aerodynamic, and electrical systems of an aircraft.
- Gained additional planning and organization skills.

AUB Physical Plant, Beirut, Lebanon   May 2021 – July 2021
Mechanical Engineering Trainee`

- Inspected generators, boilers, chillers.
- Designed a photovoltaic system.
- Enhance my management, organization, and communications skills through exposure to the rather complex corrective and preventive maintenance routines.

EXTRACURRICULAR ACTIVITIES

University Tutoring   January 2019 – Present
Personal Tutor

- Tutored the following courses: Computer Aided Drawing & Design, Manufacturing Processes, Calculus & Analytical Geometry III.

Beirut Madinati   August 2020 - September 2020
Volunteer

- Volunteered to aid and clean the capital city (Beirut) due to the august 4 explosion and launched fundraising programs.

PROJECTS

Designed a feedback control system for a drug delivery system to patients (Propofol for anesthesia purposes)

- Conducted a literature review on the evolution of drug delivery systems using open loop control schemes. Various control strategies adopted and the importance of robustness of the proposed controllers to interpatient variability were emphasized.
- Identified the systems' open loop transfer function using an inaccessible Simulink block that implements the transfer function by generating its' bode plot.
- Designed and compared a lead-lag controller and a PID controller in order to achieve given closed-loop performance specification (Rise time, Maximum overshoot, Steady-state error).

Optimize the design of a SWH (solar water heater) system

- Developed a MATLAB code to optimize both the area of the solar collectors and the area of the storage tank.
- Compare the savings due to using a SWH system to that of a traditional auxiliary water heater.

Design of a helmet capable of protecting the human head from a potential motorcycle crash

- Obtained CT scans of a patients' head upon gaining his approval from the AUB medical center.
- Used Simpleware ScanIP to export and visualize the data (CT scans) and generated a 3D model of the patients' head.
- Conducted FEA (finite element analysis) on the generated 3D model using Ansys software and compared the data obtained to experimental findings.
- Design a helmet composed of two main parts (shell and foam pads) and compared the results to the tests provided by the Federal Motor Vehicle Safety Standards (FMVSS).

SUMMARY SKILLS

Languages: Arabic, English, Portuguese
Computer skills: AutoCAD, Autodesk Inventor, LabVIEW, MATLAB, Simulink, PTC Creo (CAD/CAE/CAM), Simpleware ScanIP , Ansys, Python, Mathematica, ROS Microsoft office