HAWRAA HELLANI

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EDUCATION

Lebanese American University, *Bachelor of Engineering in Electrical Engineering* (GPA: 3.75/4.00)   *Sep 2019 – Jun 2023*
- Awarded the Innovation Award in the School of Engineering Capstone Poster Award competition
- Awarded CWEEL Scholarship for the academic year 2022/2023
- MEPI-Tomorrow's Leader Scholar who presented a poster on cultural inclusion in the workplace in engineering
- Placed on the Dean's Distinguished List of the School of Engineering and admitted to the Honors Program
- Former member of the 180 Degrees Consulting, ASHRAE, IEEE, ASME, and AEE clubs, former secretary of the Arts Club, and former newsletter writer of the AI Club

Key Projects

Sound-Based Fire Extinguishing System for Electrical Rooms (Capstone Design Final Year Project)   *Jun 2022 – Jun 2023*
- Co-developed an extinguishing system with a focus on hardware design to improve the quality and directivity of sound

Sound-Based Fire Extinguisher Start-Up Business Plan   *Mar 2023 – May 2023*
- Developed and pitched a business plan including market analysis, financial projections, and strategic initiatives

Electrical Infrastructure, Network & Telecommunication Design   *Jan 2023 – May 2023*
- Designed the lighting, low-current, low-voltage, and circuitry of a retail and office building using Dialux and AutoCAD

Faulted Power System Simulations (using PowerWorld and MATLAB)   *Dec 2022 – May 2023*
- Conducted power flow and fault analyses essential to compensate, upgrade, or size circuit breakers of the power system

PROFESSIONAL EXPERIENCE

Automate – Green ITEC, *Research and Development Intern* | Hbaline, Lebanon   *Nov 2022 – Mar 2023*
- Researched the most trending solar PV, wind, and power electronics technologies to build a hybrid green energy system
- Developed a theoretical solution that automizes and synchronizes solar and wind energies

ETA-max Energy and Environmental Solutions (IAESTE), *PV Design Intern* | Amman, Jordan   *Jul 2022 – Aug 2022*
- Investigated SCADA, cabling system, and structure construction on site and projected corrective actions where necessary
- Inspected solar panels under loads using thermal imaging and identified faults in solar cells, cables, and circuit breakers
- Designed and sized a PV system required to supply an average consumption of 1000KWh/mo using AutoCAD and PVSyst and prepared a proposal involving the monthly energy savings and payback period analysis
- Examined business strategies applied in solar PV projects and visualized different operation stages within the company

dox Technologies Inc., *Research and Development Intern* | Byblos, Lebanon   *Jan 2022 – Jun 2022*
- Researched battery testing equipment essential to equip a battery testing lab and interviewed suppliers and experts
- Investigated battery testing procedures, equipment, and battery testing certifications for storage and EV

Geek Express, *Coding Tutor* | Beirut, Lebanon   *May 2021 – Jun 2022*
- Mentored, developed, and published 100+ projects – mobile applications, games, and websites – along with my students

Kalam, *Content Writer* | Beirut, Lebanon   *Nov 2021 - Jun 2022*
- Published science-related articles based on research and creative production

Association of Energy Engineers, *Energy and Sustainability Intern* | Beirut, Lebanon   *Jun 2021 – Aug 2021*
- Designed solar PV and wind systems in a microgrid over an area of 22,000m^2 using Helioscope supplying Kanagurgan, a village in Tajikistan, with an annual production of 5.091GWh and a daily demand of 3MW

EXTRACURRICULAR EXPERIENCE

Takatcom (Vertically Integrated Project), *Hardware Design Engineer*   *Feb 2023 – present*
- Contributing to designing a solution to the system overloading issue in a microgrid arising from increased solar production by prosumers using PowerWorld
- Researching the Available Transfer Capability (ATC) and developing a mock power system to test its capabilities

- Developing a pilot model on PowerWorld to detect thermal overloading and making upgrading decisions on the transmission system

DataCamp, *Data Scientist Trainee*   *Aug 2022 – present*
- Competing in data science-focused coding competitions and designing 5+ projects using Python and SQL

LEBNET, *LEBNET WiT Fellow*   *Feb 2023 – May 2023*
- Honed my abilities in strategic planning, networking and communication, and public speaking

180 Degrees Consulting, *Student Consultant*   *Oct 2022 – Feb 2023*
- Developed an online and offline marketing strategy for ReFuse to increase customer retention, engagement, and reach

HICMA, *Labeling Co-Lead*   *Nov 2021 – Oct 2022*
- Led a team of eager volunteer labeling officers to develop a new [dataset](#) for machine learning applied to Arabic Calligraphy

All Girls Code, *Newsletter Writing Volunteer*   *Jan 2022 – Sep 2022*
- Created tech-related, motivational, and educational content and interviewed role models in the field of sustainability

Hult-Prize Foundation, *Co-founder of Green Vision*   *Mar 2022 – Jun 2022*
- Secured the 2nd Runner-Up Team position at the OnCampus program and competed at the Regional Summits in Tunisia

Collateral Repair Project, *English Teaching Volunteer*   *Jul 2021 – Oct 2021*
- Developed as a volunteer a curriculum with a focus on improving the speaking and reading skills of the student

SKILLS & PERSONAL

Languages: Arabic (native), English (fluent), French (basic)
IT: Office Package (Word, Excel, PowerPoint), Coding (MATLAB, Simulink, Python, GAMS, HTML, CSS, JavaScript, Assembly, SQL), Software Programs (PowerWorld, HelioScope, PVSyst, AutoCAD, DiaLux, Quartus II, LTSPICE)
Interests: astronomy (space exploration and theories), reading (mystery novels), baking (esp. chocolate cakes), drawing, chess