

# Dalal Hammoud

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## EDUCATION

### Lebanese American University

*Bachelor in Mechatronics Engineering*

Jbeil, Lebanon

*Aug. 2020 – Present*

### Ras Beirut International School

*Highschool*

Beirut, Lebanon

*Sept. 2005 – May 2020*

## EXPERIENCE

### LAU Industrial Hub

#### Control and Instrumentation Lead

June 2024 – Aug. 2024

- Led the control and instrumentation team, implementing customer optimizations within budget.
- Assisted in SolidWorks 3D design and adapted machinery for product transition from ketchup to molasses.

#### Consultant, Research and Design Team Member

June 2024 – Sept. 2024

- Designed a sustainable irrigation system, balancing budget constraints and environmental sustainability.

#### SolidWorks Designer

Sept. 2024 – Dec. 2024

- Utilized reflective stickers for 3D scanning of a thin, dark object and optimized the design in SolidWorks.

## PROJECTS

### CinemaBooking Website | *SQL, PHP, HTML, CSS, JavaScript*

Oct. 2024 – Dec. 2024

- Developed a dynamic cinema booking website with an SQL database and admin controls.

### Wine Bottle Capper Dispenser | *SolidWorks, Mechanical Design*

Nov. 2024 – Dec. 2024

- Designed an autonomous wine bottle capper in SolidWorks, adhering to ISO standards.
- Performed necessary simulations such as stress and strain displacement analysis

### Vertically Integrated Project - Smart Irrigation System | *C++*

Jan. 2024 – May 2024

- Developed a smart irrigation system using sensors to monitor temperature, pH, humidity, and moisture, optimizing water usage for crops.
- Enabled remote control via a user-friendly mobile app for improved efficiency and yield.

### Electroverse | *C#, Unity, Google Cardboard*

March 2023 – April 2023

- Built a virtual reality electrical lab using Unity and Google Cardboard, allowing users to build and experiment with circuits.

### Solar Panel Cleaning Robot | *C++*

Oct. 2022 – Dec. 2022

- Designed an autonomous robot capable of safely cleaning inclined solar panels (0-30° slopes).
- Implemented an S-shape algorithm using accelerometer and gyroscope data for surface tracking.

### Conveyor Robotic Arm | *Solidworks*

Nov. 2022 – Dec. 2022

- Designed and modeled a robotic arm in SolidWorks that picks up objects off a moving conveyor belt and places them in desired locations.

### Earth Rover | *C++, LabView*

April 2022 – May 2022

- Developed a wireless Arduino and MYRIO-based cave explorer controlled via hand gestures.

## TECHNICAL SKILLS

**Languages:** Java, Python, C/C++, Assembly, LabView, SQL

**Software Applications:** Git, VS Code, Visual Studio, Microsoft Office, Google Cloud Platform, SolidWorks, AutoCAD, Intel Quartus Prime, OrCAD PSpice, LTspice, LabVIEW, Primavera, Jupyter Notebook

## CERTIFICATES

### Certified SolidWorks Associate (CSWA) | *SolidWorks*

Oct. 2022 – Present

- Certified in Associate-Mechanical Design with SolidWorks.