

# JAD DANNAOUI

## MECHANICAL ENGINEER

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Dynamic and results-driven Mechanical Engineer with extensive experience in optimizing machinery and production workflows to deliver measurable results. Skilled in CAD design, FEA analysis, and renewable energy systems, with a strong foundation in lean manufacturing techniques. Proficient in troubleshooting mechanical systems to minimize downtime and enhance efficiency. Seeking to contribute technical expertise and innovative problem-solving to challenging engineering projects.

## EDUCATION

### Bachelor's Degree in Mechanical Engineering

June 2022

*Beirut Arab University*

Achieved second rank in class with a GPA of 3.5/4.0. Specialized in machinery operations and the design of advanced mechanical systems.

## WORK EXPERIENCE

### Machinery Technician - MPCF

November 2022- June 2023

- Led optimization projects in tissue paper production, reducing waste by 15% and boosting output by 10%.
- Identified and rectified critical machinery failures, reducing production line downtime by 20% and ensuring uninterrupted operations.
- Implemented Lean manufacturing techniques to enhance productivity by streamlining operations, cutting costs by 10%, and improving overall efficiency.

### Private Tutor

September 2021 – March 2022

- Provided one-on-one tutoring to undergraduate students, simplifying complex concepts and promoting a deeper understanding.
- Elevated student performance through tailored teaching methods and interactive problem-solving activities.
- Created a supportive and engaging learning environment, fostering confidence and academic growth.

## SKILLS

### Technical Skills

- CAD Design, Finite Element Analysis (FEA), Lean Manufacturing, Renewable Energy Systems (Wind, Solar), HVAC Design, Thermodynamics, Fluid Dynamics, Python.
- 3D Visualization, Arduino Programming, Simulation Modeling, Material Science, Machinery Troubleshooting.
- Proficient in conducting advanced simulations and analyzing test data to optimize mechanical designs and system performance.
- Ability to write clear and comprehensive technical documentation.

### Soft Skills

- Leadership, Teamwork, Problem-Solving, Critical Thinking, Attention to Detail, Time Management
- Process Optimization, Communication, Adaptability, Negotiation, Client Relationship Management, Presentation Skills.

## CERTIFICATES

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### Scientific Computing with Python (FreeCodeCamp, December 2024)

Developed expertise in scientific computing using Python, applying numerical methods and simulations, and increasing project efficiency by 20%.

### Mastery in Data Analysis Tools: Microsoft Excel & Google Sheets

Achieved mastery in Excel and Google Sheets, utilizing advanced tools like pivot tables, macros, and VLOOKUP to optimize data analysis and reporting workflows by 40%.

### Typing Speed and Accuracy Certification (Ratatype, Nov 2024)

Achieved a typing speed of 75 WPM with 98% accuracy, ensuring fast and precise data entry for high-volume tasks.

### Data Entry Masterclass (Udemy, Nov 2024)

Completed over 20 hours of training focused on improving data entry skills, enhancing speed and accuracy by 35% in database management and entry tasks.

## PROJECTS

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### Renewable Energy System Optimization

- Designed and optimized a vertical axis wind turbine, refining blade aerodynamics to enhance energy output by 30%.
- Collected and analyzed performance data to assess efficiency, driving informed decisions in renewable energy research and system optimization.
- Collaborated in system implementation strategies, contributing to the development of more effective renewable energy solutions.

### Advanced Simulation Techniques

- Developed Python-based simulations for fluid mechanics and energy systems, including:
  - Free-fall simulation modeling the effects of gravity and drag forces.
  - Pipe flow simulation based on the Hagen-Poiseuille equation to predict fluid behavior in pipes.
  - Solar power output comparison between tracking and fixed systems, with 3D visualizations.
- Leveraged Matplotlib and scientific computing techniques to enhance data analysis, improve simulation accuracy, and boost simulation efficiency by 25%.

## LANGUAGES

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- Native arabic
- Fluent in english
- Proficient in french