Abdallah Benelmadjat

Fulbright Scholar | Energy Engineering Student
Projects Portfolio: abdallah-benelmadjat.github.io/portfolio

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Energy / Electromechanical Engineer with ongoing M.S. in Energy Engineering. Experience in Energy efficiency, NDT, automation, & manufacturing. Proficient in Programming and 3D CAD software. Fulbright Scholar committed to advancing sustainability.

EDUCATION

M.S., Energy Engineering; Modern Energy Production and Sustainable Use — May 2024
Arizona State University, Tempe, Arizona — GPA: 4.0

M.S., Electromechanical Engineering; Industrial Maintenance Engineering — Sep 2021
Thesis Project: Classification of Gear Defects using Neural Networks (Deep learning) — GPA: 4.0
Univ. Science and Technology Houari Boumediene, Algeria

B.S.E., Mechanical Engineering; Mechanical Construction Engineering — Oct 2019
Univ. Science and Technology Houari Boumediene, Algeria — GPA: 3.5

WORK EXPERIENCE

Energy Efficiency Engineering Intern: Leidos Engineering & Ameren, Collinsville, IL — May 2023 – Aug 2023
- Conducted comprehensive energy audits and calculated saving estimates, enhancing efficiency in industrial markets.
- Assisted in technical application reviews for Ameren Illinois, gaining vital understanding of the approval process.
- Researched emerging technologies, aiding in the development of new saving methods for electric/gas customers.

NDT Laboratory Operator Intern: ERMAero Aeronautical Equipment Renovation, Algiers, Algeria — Nov 2021 – Dec 2021
- Performed UT/RT NDT tests on aircraft parts, ensuring industry-standard compliance and defect identification.
- Utilized advanced inspection devices to examine aircraft frames and identify defects/anomalies that require repair.
- Co-developed and implemented new inspection methods with engineering team to enhance testing efficiency.

Process Control and Automation Intern: Sonatrach Petroleum, In Amenas, Algeria — Dec 2019 – Jan 2020
- Assisted with the installation, configuration, and maintenance of automated control systems for power gas turbines.
- Troubleshot and supported control systems, collaborating with engineers and technicians to prevent downtime.
- Managed maintenance schedules and tracked activities using a Computerized Maintenance Management System.

Precision Manufacturing Intern: GRALCOME, Boumerdès, Algeria — Mar 2019 - Apr 2019
- Utilized SolidWorks and CNCs to design and produce high-quality machined parts from concept to completion.
- Conducted quality tests on finished products to ensure compliance with industry standards and specifications.
- Streamlined and improved inventory management processes, reducing waste and minimizing production delays.

ADDITIONAL EXPERIENCE

Research Assistant Volunteer: Photovoltaic Reliability Laboratory, Mesa, AZ — Jan 2023 – Mar 2023
- Planning and executing experiments to evaluate the performance and reliability of solar photovoltaic systems.
- Contributing to ongoing research efforts to improve the efficiency and sustainability of solar energy technology.

Robotics Teacher: Ecole Opiniâtre, Algiers, Algeria — Dec 2020 – Oct 2021
- Educated high school students on robotics and programming fundamental concepts and principles.
- Coordinated with other teachers and staff to integrate robotics/programming into other subject areas, such as math.

AWARDS

Fulbright Student Scholarship Grantee for 2022: ECA, U.S. Dep of State, DC — Nov 2021 – Present
Selected as grantee for the Fulbright Student Program, a U.S. Dep of State scholarship which fully funds my studies:
- Achieved selection, outcompeting hundreds of applicants to secure one of only six nominations.

TECHNICAL SKILLS

- **Data Analysis and Statistics:** MATLAB, Python, Excel
- **Design & Modeling Tools:** SolidWorks, Ansys, Revit
- **Renewable Energy Tools:** WindPRO, PVsyst, OpenWind

INTERPERSONAL SKILLS

- Teamwork skills, active listening and note keeping.
- Responsibility, dependability, and reliability.
- Time management, strategizing, and planning.