Mohamed ayoub Essalami, *MSc*

Third-year student in Energy Engineering and Environmental Technology

+216 94801112
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Gafsa, Tunisia
www.linkedin.com/in/mohamed-ayoub-

Objective

Highly accomplished third-year Energy Engineering and Environmental Technology student with top honors in both a Bachelor's in Fundamental Physics and a Master's in Innovative Materials and Energy Management. Skilled in COMSOL, ANSYS, Python, and MATLAB, with research focused on perovskites for magnetic refrigeration and solar cells. Certified in Data Science by Google, IBM, Microsoft, and Meta, I aim to apply my expertise in sustainable technologies and data-driven solutions to real-world energy challenges.

Technical Skills

- **Modeling and Simulation**: COMSOL, ANSYS
- **Programming Languages**: Python, MATLAB, JavaScript, R
- **Data Analysis and Modeling**: Certified in Data Science (Google, IBM, Microsoft, Meta)
- **Energy Management**: Innovative materials technologies, energy systems optimization

Soft Skills

- Complex problem solving
- Analytical and Critical Thinking
- Travail d'équipe
- Organisation
- Sens de la communication
- Leadership
- Capacité d'adaptation
- Autonmie

Languages

Arabic — French — English — German

Professional Experience

August 1, 2024 – August 31, 2024
Gafsa, Tunisia

Technician Intern

STEG Gafsa, Photovoltaic Research Laboratory – Gafsa, Tunisia
Supervised by ***Khmissa Brahmi***

- **Installation & Maintenance:** Assisted with the setup and upkeep of photovoltaic systems, ensuring efficient operation.
- **System Testing:** Conducted inspections and troubleshooting to maintain system performance.
- **Data Analysis:** Collected and analyzed performance data to support research and efficiency improvements.
- **Equipment Calibration:** Supported the development and calibration of testing equipment for accurate measurements.
- **Reporting:** Created technical reports documenting experimental results and suggesting enhancements.

July 1, 2024 – July 31, 2024
Gafsa, Tunisia

Technician Intern

CPG | Compagnie des Phosphates de Gafsa, Phosphate Drying Unit – Gafsa, Tunisia
Supervised by ***Abdelkader Barhoumi***, Head of Energy Audit Division

- **Phosphate Drying & Maintenance**: Supported phosphate drying operations, conducted routine maintenance, inspections, and minor repairs to ensure optimal performance.
- **Energy Efficiency & Reporting**: Assisted in energy audits by analyzing data and suggesting improvements; prepared reports on maintenance, performance, and energy efficiency.

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2023 - Present

Gafsa, Tunisia

Research Student

Research Laboratory of Technology, Energy, and Innovative Materials (TEMI), Faculty of Sciences (FSGF) – Gafsa, Tunisia

Supervised by Dr. Taoufik Mnasri, MC, Director of the Preparatory Institute for Engineering Studies of Gafsa, Physics Thesis Committee

- **Research Focus**: Investigating innovative materials, including perovskites for magnetic refrigeration.
- **Techniques and Analysis:** Applied techniques such as X-ray Diffraction (XRD), Thermogravimetric Analysis (TGA), and Superconducting Quantum Interference Device (SQUID) for material characterization.
- **Software Proficiency:** Utilized software tools including Full prof, GSAS II, and VETAS for data analysis and modelling.

Education

2023/2025

Gafsa, Tunisia

Energy Engineering and Environmental Technology

École Nationale d'Ingénieurs de Gafsa – Gafsa, Tunisia

2024/2025 - 3rd Year, Ongoing

2023/2024 - 2nd Year, Grade: Fairly Good

2021/2023

Gafsa, Tunisia

Master's Degree in Innovative Materials and Energy Management

Faculté des Sciences de Gafsa, Gafsa, Tunisia

2022/2023 - 2nd Year, Grade: Good {Thesis Defense: Excellent}

2021/2022 - 1st Year, Grade: Good

2017/2020

Gafsa, Tunisia

Bachelor's Degree in Fundamental Physics

Faculté des Sciences de Gafsa, Gafsa, Tunisia

July 7, 2020 - Degree Awarded, Grade: Fairly

2019/2020 - 3rd Year, Grade: Fairly Good

2018/2019 - 2nd Year, Grade: Good

2017/2018 - 1st Year, Grade: Good

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2016/2017 — **Baccalaureate in Mathematics**

Gafsa, Tunisia — *Lycée Ibn Rached Gafsa, Gafsa, Tunisia*

July 8, 2017 Grade: Fairly Good

Interests

• ***Investigating Innovations in Renewable Energy:*** 🥰⚡ Passionate about finding and creating state-of-the-art renewable energy technology. The promise of solar systems 🌎 and cutting-edge cooling techniques like magnetic refrigeration ❄️ to power sustainable energy solutions really excites me! 🚀

• ***Pioneering Innovative Materials:*** 🧪✨ I'm fascinated by the nexus between technology and materials science. I proactively investigate novel materials, like perovskites 🔬, to push the limits of environmental impact and energy efficiency. Converting these breakthroughs into useful applications is what interests me! 💡🔋

• ***The Use of Computational Techniques and Data Science:*** 📊💻 Enthusiastic about using data science to solve challenging engineering problems. I'm driven to use my programming talents in Python 🐍, MATLAB, R, and JavaScript 🌐 to model physical systems, analyze massive datasets 📈, and provide useful insights. I really like writing code in these languages! 👨‍💻👨‍💻

• ***Promoting and Executing Actions for Environmental Sustainability:*** 🌳🌎 The goal of the organization "*Advancing Environmental Sustainability*" is to decrease ecological footprints by incorporating green technology and solutions into daily behaviours. 🌿💚

• ***Taking Part in Scientific Research:*** 🔍🧬 Committed to keeping on the cutting edge of scientific advancements and making significant contributions to research. Working with researchers, doing provocative experiments 🔬, and turning study results into useful inventions are things that I really enjoy doing! 💡🔍

• ***Creative Problem Solving:*** 🤔💡 Take pleasure in using original thinking to solve challenging issues. Creating original answers to problems facing the actual world excites me, whether it be through the design of experiments, the development of novel theories, or the optimization of systems! 🔧✨

References

References and additional information are available on my website: [About Me 😊]

Mohemed Ayoub