Hasnae MOATAZ
Graduate Engineer

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🏠 Benguerir, hay Nour 264

📅 Date of birth 07/11/2001
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Master's graduate in Electrical Engineering for Renewable Energies from UM6P with hands-on experience in electrochemical system modeling using Python. Specialized in sustainable technologies, carbon utilization, and green hydrogen.Motivated to apply my skills and knowledge to challenging projects that drive innovation and create real-world impact

Research interests

Electrochemical CO_2 conversion and mineralization
Green hydrogen and ammonia synthesis
Electrochemical system modeling and simulation
Carbon capture and utilization (CCU)

Skills

Electrochemical System Simulation

Data-driven Analysis for Energy Systems

Programming and digitalization

Preparation of Technical Reports

Computer skills

Python(Pyomo,Numpy,Scipy,Pandas)

Matlab-Simulink

pVsyst

TIA portal

Pack office,Ganttproject

Languages

Arabic

English

French

Turkish

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Assets

Fast Learner

Adaptable

Proactive and Initiative-driven

Teamwork

Interests

Personal Development

Foreign Languages

Sports

Education

Master's in Electrical Engineering for Renewable Energies and Smart Grids.
Since October 2023 **Green Tech Institute - UM6P** Morocco

Professional Bachelor's Degree in Industrial Operations and Digitalization
From October 2020 to July 2023 **Green Tech Institute - UM6P** Morocco
Honors: With Distinction

Preparatory Year in Science and Technology
From October 2019 to July 2020 **Green Tech Institute - UM6P** Morocco
Honors: With Distinction

High School Diploma
From September 2018 to June 2019 **Abdellah Ibrahim High School** Morocco
Honors: With Highest Distinction

Professionnal experiences

Final internship : Modeling and simulation of electrochemical processes
From February 2025 to July 2025 **Acer Coe, Um6p** Benguerir

- Developed steady-state and dynamic models of the chlor-alkali electrochemical process using Python and Pyomo.
- Simulated production of H_2, Cl_2, and NaOH with integrated mass, charge, and energy balances.
- Investigated reaction kinetics, current efficiency, and energy consumption for optimization.
- Applied numerical methods and data-driven analysis to evaluate process efficiency and scalability.

Final internship: Autonomous Operation of the Storing Machine
From April 2023 to July 2023 **OCP** Morocco

- Modeled and analyzed the storing machine's operation.
- Designed and implemented automation strategies using control systems.
- Contributed to system integration and digitalization efforts.

Summer internship: Study of the Operation of the PI System
From July 2022 to August 2022 **OCP** Morocco

- Analyzed the operation of the PI (Plant Information) System.
- Contributed to the digital transformation of data processes.

Academic Projects

- Impact of Intermittency on the Aging of Electrolyzers
- LCOE of a Hybrid Production Station (60% Thermoelectric + 40% PV) Over a 15-Year Period
- Study of the Maxpid Robot Arm in Terms of Speed and Position
- Design of a Graphical User Interface for a Website