Hana BEN ALAYA

📞 +216 90 792 688　✉ Hana.benalaya@outlook.com　🔗 @hana-ben-alaya-6837a4202

Experience

ACTIIS TUNIS　　　　　　　　　　　　　　　　　　　　April 2025 – October 2025
Piping Flexibility Analysis Engineer　　　　　　　　　　　　　　　　*Tunisia*
- Performed flexibility studies and hydraulic analyses of piping networks using CAESAR II, in compliance with EN 13480 and ASME B31.3 codes.
- Modelled piping networks, conducted static and dynamic analyses for various load cases, and defined the support system.

WE MAKE 3D　　　　　　　　　　　　　　　　　　　　July 2024 – August 2024
Electromechanical Engineer　　　　　　　　　　　　　　　　　　*Tunisia*
- Designed a storage, drying, and heating box for filament using SolidWorks.
- Programmed a filament heating system using Arduino.

GEFTECH　　　　　　　　　　　　　　　　　　　　　　　　　July 2023
Electromechanical Engineer　　　　　　　　　　　　　　　　　　*Tunisia*
- Studied and designed an aircraft turbine blade part using SolidWorks.
- Prepared a manufacturing process plan with G-code.

Les Ciments de Bizerte　　　　　　　　　　　　　　　　　Feb 2022 – June 2022
Technician　　　　　　　　　　　　　　　　　　　　　　　*Tunisia*
- Studied and designed a combined system including a pallet conveyor and a lifting table using SolidWorks.

Ennakel Automobile　　　　　　　　　　　　　　　　　　Jan 2020 – Feb 2020
Technician (Introductory internship)　　　　　　　　　　　　　　　　*Tunisia*

Projects

CNC Machine for Acoustic Foam Cutting | *G-code, ESP32, ISIS, Universal G-code Sender, SolidWorks*
- Created 3D models and simulations for a CNC machine designed to cut acoustic foam using SolidWorks.
- Implemented GRBL for CNC machine control, improving the precision of the manufacturing process.

Filament Drying and Heating Storage Box | *PlatformIO, ISIS, SolidWorks*
- Designed and simulated a 3D heated storage box for filament drying using SolidWorks.
- Developed electronic wiring diagrams using ISIS.
- Programmed the system with PlatformIO (Arduino) to maintain optimal drying conditions.

Certificates

SolidWorks Associate – Mechanical Design (CSWA)
Higher Institute of Technological Studies of Kairouan　　　　　　　　April 28, 2022
Applications of AI for Predictive Maintenance – NVIDIA
ESPRIT Private Higher School of Engineering and Technology, Tunis　　October 24, 2024

Technical Skills

Programming Languages: C, C++, Python, MATLAB, VHDL
Mechanical CAD: SolidWorks, AutoCAD, CAESAR II
Electrical: PSIM, Proteus
Embedded Systems: ESP32, STM32CubeMX, Quartus, Arduino, Node-RED, Altium Designer, WINDEV
Industrial Automation: TIA Portal V16, Factory IO
ERP / Industrial Management: SAP

Education

Private Higher School of Engineering and Technology (ESPRIT)　　　　　Tunisia
Electromechanical Engineering
Higher Institute of Technological Studies of Kairouan　　　　　　　　Tunisia
Advanced Technician in Mechanical Engineering