



MOHAMED AMINE AFFES

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EXPERIENCE

Automotive Lighting Brotterode GmbH

Nov 2021 – Jan 2024

Automotive Lighting Assembly Technician (Student Job)

Brotterode, Germany

- Tested and troubleshooted electrical components in automotive lighting systems.
- Used hand tools and automated machinery for precise assembly.
- Conducted electrical quality control checks.

Technologie und Grunder-Forderungsgesellschaft (Ecovation)

Jun 2021 – May 2022

Renewable Energy Systems Optimization

Schmalkalden, Germany

- Optimized solar energy production by conducting simulations to determine the maximum energy yield and hydrogen storage potential for fully solar-powered greenhouses in Germany.
- Developed a smart solar tracking system using sensors to detect optimal panel positioning for maximum efficiency, increasing energy capture and improving overall system performance.
- Integrated hydrogen as an energy storage solution, ensuring surplus solar energy was efficiently converted and stored as green hydrogen for later use, supporting a sustainable greenhouse ecosystem.
- Streamlined component selection for cost-effectiveness and reliability, applying supplier management and negotiation skills to reduce project expenses.
- Validated system efficiency through advanced simulations and testing, achieving energy gains while ensuring seamless integration with greenhouse operations.

EDUCATION

Masters in Mechatronics and Robotics

Oct 2022 – Present

FH Schmalkalden University of Applied Sciences - 2,9

Schmalkalden, Germany

Master in Mechanical Engineering, Exchange Program

Oct 2020 – Mar 2022

FH Schmalkalden University of Applied Sciences - 2,0

Schmalkalden, Germany

Masters in Electro-Mechanical with Industrial Engineering specialization.

Sep 2016 – Sep 2022

Ecole Supérieure Privée d'Ingénierie et de Technologies Accreditation EUR-ACE - 2,4

Tunis, Tunisia

Baccalaureate in Technological studies.

Sep 2015 – Sep 2016

Lycee Wafa - 2,51

Tunis, Tunisia 2,51

SKILLS

Programming Languages: Proficient in Python, C, C++, G-code, and Visual Basic for Applications (VBA).

Engineering Software: Advanced proficiency in SolidWorks, CATIA V5, AutoCAD, Tia Portal, Autodesk Vault, Altium Designer, ANSYS, and MATLAB.

Software Proficiency: Office Suite: Skilled in Microsoft Office Word, Excel, PowerPoint. . **Management**

Skills: Expertise in Lean Management, Quality Management, Supply Chain Management, Six Sigma, and ISO 9001 standards. Familiar with Ishikawa (Cause and Effect) diagrams for problem-solving.

Design Tools: Competent in Adobe Illustrator and Photoshop. **ERP Systems:** Experienced with SAP.

ORGANISATIONS

AIESEC Bardo

Jan 2019 – Dec 2020

Strategic Volunteer and Partnership Coordinator

Tunis, Tunisia

- * Contributed as a volunteer at AIESEC, facilitating key partnerships to broaden impact. Enhanced organizational reach and project success through strategic collaborations, leveraging skills in negotiation and project coordination.

AIESEC Bardo

Nov 2017 – Jan 2018

President of the Organizing Committee for Youth for SDGs Initiative & Conference

Tunis, Tunisia

- * Led 'Youth for SDGs' initiative, enhancing youth participation and action on sustainability. Managed event organization and stakeholder engagement, achieving targeted outcomes for global development goals.

PROJECTS

Force Hammer Game

Jan 2017 – Jun 2017

- Developed an interactive game using Arduino to measure and display players' exerted force, showcasing mechanical design and sensor integration skills.
- Led the design and implementation, focusing on the mechanical aspects of force measurement, sensor selection, and integration with the Arduino platform.

Musical Floppy Drives

Jan 2018 – Jun 2018

- Contributed to the mechanical design and assembly of an innovative art installation using repurposed floppy drives, ensuring precise movement and control for musical output.
- Assisted in integrating the mechanical components with the electronic control system, showcasing adaptability and collaboration in a multidisciplinary project.

SMART House

Jun 2018 – July 2018

- Led the development of a SMART House prototype, focusing on the design and implementation of electrical and electronic systems for automation and energy efficiency.
- Integrated various sensors with Arduino, developed custom software for control and monitoring, and demonstrated the successful implementation of smart home technologies.

Quality Survey for EUR-ACE Accreditation

Sep 2018 – Jun 2019

- Conducted a comprehensive quality survey and statistical analysis to support the renewal of the engineering university's EUR-ACE accreditation.
- Designed and implemented the survey, analyzing responses to assess and improve educational quality and compliance with accreditation standards.

Development of an ESP32-based XY Pen Plotter

Oct 2023 – July 2024

- Led mechanical design and implementation of an ESP32-based XY Pen Plotter with code-based DC motor control. Designed and 3D-printed the plotter, ensuring precise rendering of images.

LANGUAGES

- English Language : **C1** · French Language : **C1** · German Language: **A2** · Arabic Language : **B2**