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Tunisie

PFE BOOK

2025-2026

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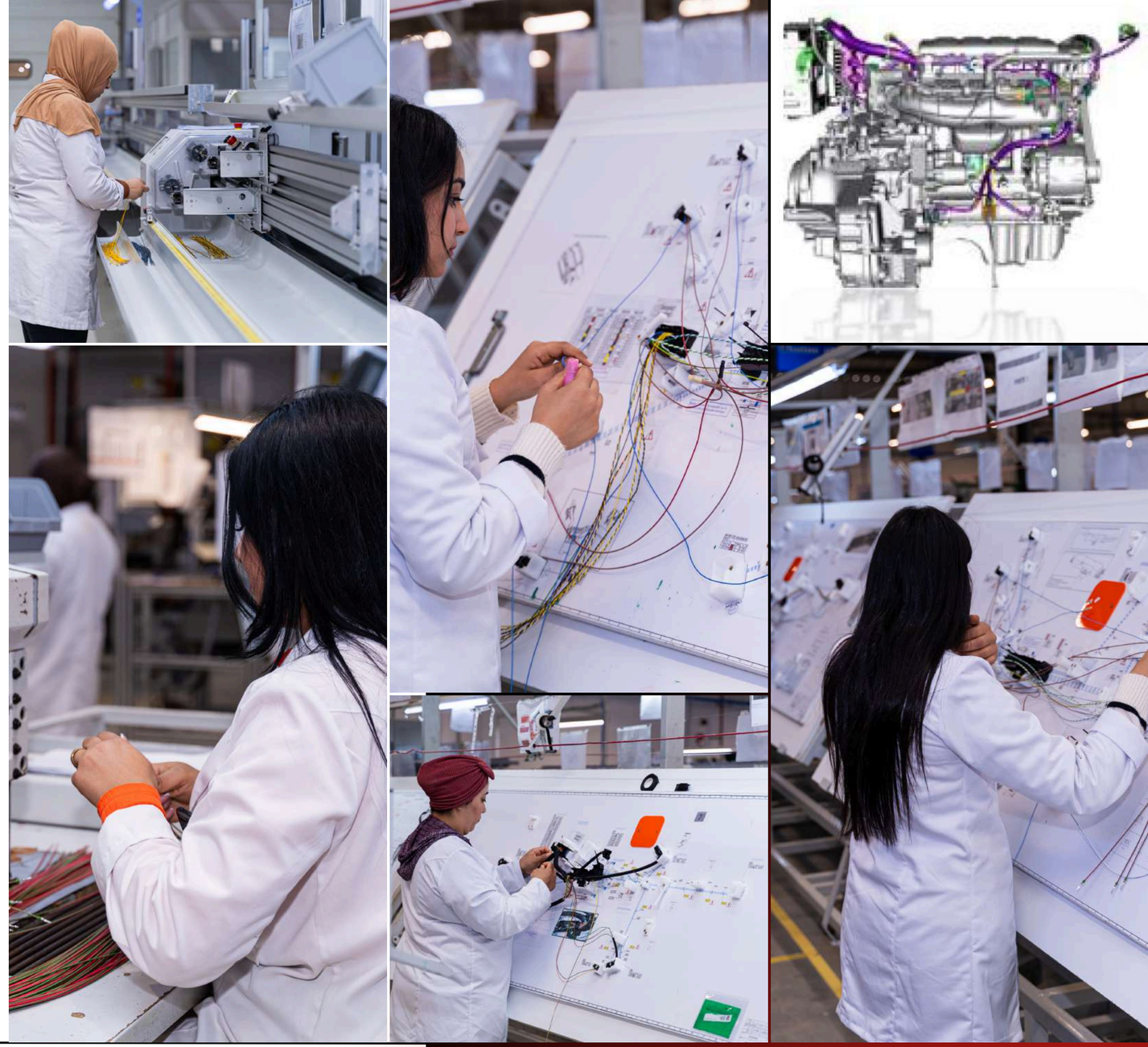
Contents



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Automotive History :

1966 - 1979

Where it all began

On a greenfield site, Kabel- und Metallwerke Neumeyer (Cabling and Metallurgy) built a production facility in Floss to manufacture wires and cable harnesses for household appliances, computers, and agricultural vehicles. This is how WE began.

Very quickly, BMW, Ford, and Porsche were among our first automotive customers, soon joined by others. Since 1973, we have been serving our clients independently from our headquarters in Floss.

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About us :

- A subsidiary of the German group Nexans Autoelectric, specializing in wiring systems.

5000+
Collaborators

5
Locations

100+
Projects

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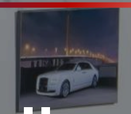
OUR CURRENT LOCATION

2009 — Ksar Hellal

2012 — Messadine

2014 — Sidi Abdelhamid

2022 — Soliman



2022 — Logistic Service Center

Our alues

- OBJECTIVE ORIENTATION
- MUTUAL TRUST
- TRANSPARENCY AND INFORMATION SHARING
- IMPECCABLE ETHICS AND MUTUAL RESPECT
- INITIATING AND EMBRACING CHANGE
- TEAMWORK

Our lients

Audi

LAMBORGHINI

JLR

AMG

BMW

PORSCHE

PORSCHE

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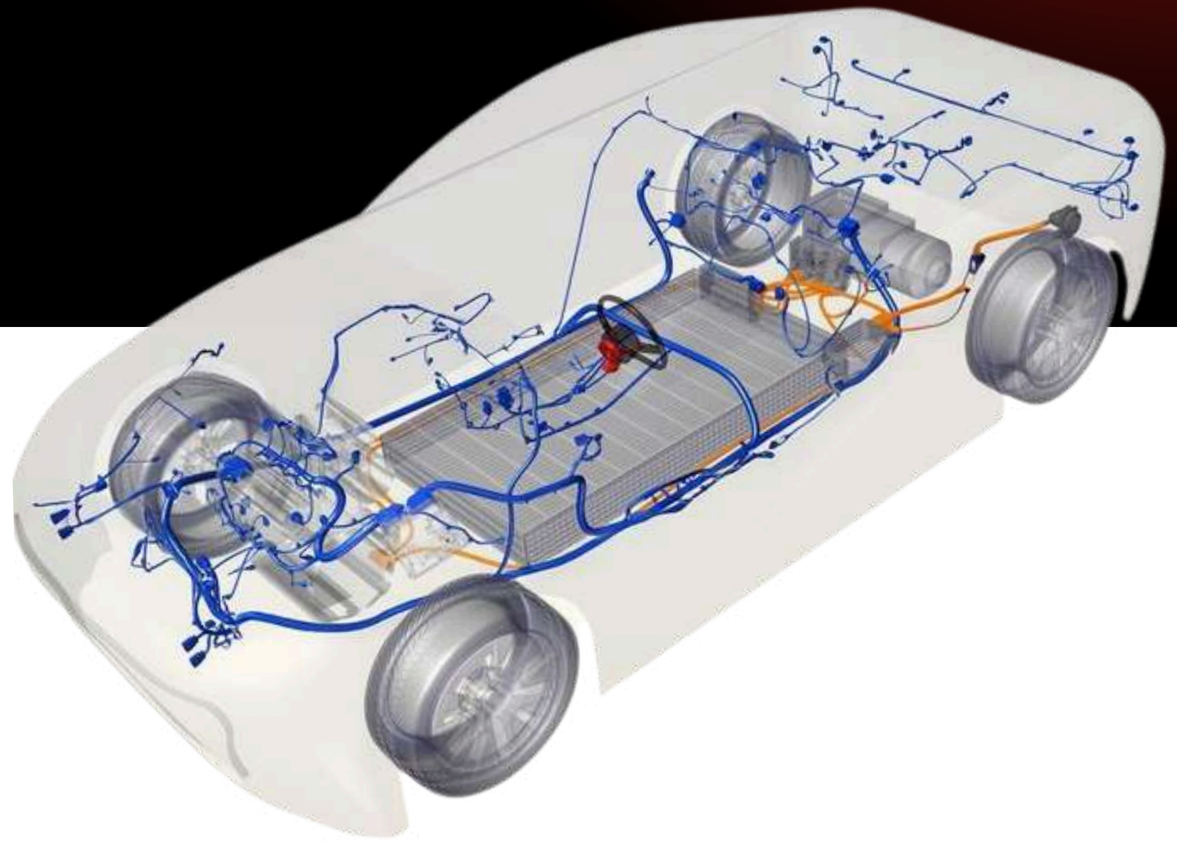
Our Mission



Nexans Autoelectric Tunisia is a leading manufacturer of automotive wiring systems. The company specializes in producing complex wiring harnesses for multiple vehicle models, ensuring high standards of quality, safety, and performance.

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Our Selection Process :

1. Preselection according to the resume
2. Pre-qualification
3. Assessment Day
4. Integration Day
5. Learning phase
6. The feedback and improvement phase
7. Preliminary Review Session
8. Pre-hiring

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Internship opportunities

Sousse :
Zone industrielle Messadine

Subject 01: Dashboard for Online failure management

Department : Quality

Description:

Design and development of a dashboard for better management of the failures detected on the harnesses testing station by quick reaction in the production line.

Tasks:

- Study of initial Situation
- Create automatic export of data from APIMS
- Design and development of the dashboard
- Simulation of the dashboard in production line

Profile:

IT Master degree

Required Skills:

VBA, Power BI

Duration:

06 Months

Number of Interns:

01 Intern

Subject 02: Online Daily Check

Department : Quality

Description:

The purpose of this project is to ensure the digitalization of the entry from the daily check carried-out by controller, to ensure the immediate feedback.

Tasks:

- Design and development of a digital daily check
- Creation of a Safety Quality-alarm concept in case of deviation
- Simulation of the concept in the assembly lines

Profile:

IT Master degree

Required Skills:

VBA, Power BI, Visual Basic

Duration:

06 Months

Number of Interns:

01 Intern

Subject 03: Integrated Management System – Harmonization and Project Optimization

Department : Production

Description:

Manage an IMS integration project focused on documentation compliance, cross-functional practices, team engagement, and feedback capitalization.

Tasks:

- **Standardize documentation**
- **Run or support trainings and workshops**
- **Share best practices and outcomes internally**
- **Implement PDCA and corrective actions**
- **Track project indicators and reporting**
- **Monitor team engagement**

Profile:

Master Degree (or in progress) in quality, industrial, or systems management

Required Skills:

Knowledge of ISO 9001, IATF 16949, ISO 14001, ISO 45001

Duration:

06 Months

Number of Interns:

01 Intern

Subject 04: Standardization of Best Operational Practices in Production

Department : Production

Description:

Variations between operators lead to inconsistencies in quality and productivity.

Tasks:

- Identify the best practices at the workstation
- Develop visual standards and instruction sheets
- Train operators and evaluate performance after implementation
- Standardization of production practices
- Improved productivity and process stability

Profile:

Industrial / Manufacturing / Production Engineering Student

Required Skills:

Manufacturing & production knowledge
Process analysis & improvement

Duration:

06 Months

Number of Interns:

01 Intern

Subject 05: Design and Manufacturing of a Semi-Automatic Bundling Machine for Automotive Wiring

Department : Cutting

Description:

The objective of the project is to design and build a semi-automatic bundling machine to standardize, speed up, and make this operation more reliable.

Tasks:

- Analyze requirements: wire types, sizes, and production rates
- Design mechanical and electrical systems
- Select actuators, sensors, and controls
- Create CAD models and technical drawings
- Build and test prototype for reliable operation
- Optimize design based on test results
- Prepare user manuals and maintenance documentation

Profile:

Mechanical / Mechatronics / Manufacturing Engineering Student

Required Skills:

CAD & mechanical design; Manufacturing processes

Duration:

06 Months

Number of Interns:

01 Intern

Subject 06: Implementation of a Machine Performance Monitoring System (OEE)

Department : Maintenance - Production - Engineering

Description:

Machine performance monitoring is not digitalized and lacks real-time visibility.

Tasks:

- **Design a database to track OEE by machine**
- **Implement a dashboard (Excel / Power BI)**
- **Propose a continuous improvement plan**
- **Real-time monitoring of performance indicators**
- **Increased responsiveness in case of deviations**

Profile:

Industrial / Manufacturing / Mechatronics Engineering Student

Required Skills:

Manufacturing & OEE knowledge
Data analysis (Excel/Power BI)

Duration:

06 Months

Number of Interns:

01 Intern

Subject 07: Predictive Maintenance of Zeta/Omega Machines Using AI

Department : Maintenance - Engineering - Production

Description:

Machine downtime is often unpredictable, and maintenance is primarily reactive.

Tasks:

- Collect historical data on breakdowns, downtime, vibrations, temperature, etc
- Use AI algorithms (regression, random forest, neural networks) to predict failures before they occur
- Propose a predictive maintenance schedule
- Reduction in unplanned downtime
- Improvement of MTBF (Mean Time Between Failures)
- Shift from corrective to proactive maintenance

Profile:

Industrial / Mechanical / Mechatronics with interest in AI and data analysis

Required Skills:

Maintenance & MTBF knowledge
Data analysis & AI/ML (Python, R)

Duration:

06 Months

Number of Interns:

01 Intern

Subject 08: Prediction of Scrap Rate Using AI

Department : Quality - Production - Engineering

Description:

Scrap rates vary from one workstation or team to another without an obvious cause.

Tasks:

- Create a database including production data, operators, machine parameters, and defects
- Use AI to predict scrap risks based on production conditions
- Propose optimal settings or operating conditions
- Reduction in scrap rate
- Better understanding of hidden causes of defects

Profile:

Industrial/Manufacturing/Data student,
AI & process optimization focus

Required Skills:

Manufacturing & quality control
Data analysis & AI/ML (Python, R)

Duration:

06 Months

Number of Interns:

01 Intern

Subject 09: Optimizing Production Scheduling Using Artificial Intelligence

Department : Quality - Production - Engineering

Description:

Production schedules are often created manually, without dynamically accounting for priorities and machine constraints.

Tasks:

- Model real-world constraints such as capacity, priorities, deadlines, and machine breakdowns
- Develop an optimization algorithm based on AI (or genetic algorithms)
- Compare the AI-generated schedule with the current manual schedule
- Reduced production delays
- Improved utilization of resources (machines and operators)

Profile:

Industrial / Manufacturing / Data Student with interest in AI

Required Skills:

Production planning & scheduling
AI, ML, or optimization algorithms

Duration:

06 Months

Number of Interns:

01 Intern

Subject 10: Intelligent Real-Time OEE Monitoring System

Department : Engineering - Production - Maintenance

Description:

OEE (Overall Equipment Effectiveness) is currently monitored manually and updated retrospectively.

Tasks:

- Develop a connected interface (e.g., Python + Power BI / IoT)
- Integrate an AI model that anticipates OEE drops based on production trends
- Provide automatic alerts to supervisors via a dashboard
- Real-time OEE monitoring
- Early detection of deviations before they impact production

Profile:

Industrial / Manufacturing / Data
Student with interest in AI and digitalization

Required Skills:

Data acquisition & system integration
Python & Power BI

Duration:

06 Months

Number of Interns:

01 Intern

Subject 11: Optimization of Lead Time

Department : Engineering - Production - Maintenance

Description:

Analysis of process steps to identify sources of delays and implementation of actions aimed at reducing the total production or supply lead time.

Tasks:

- Map current workflows and identify bottlenecks
- Analyze lead times and data (production, inventory, logistics)
- Implement improvements and monitor results
- Document findings and suggest continuous improvements

Profile:

Student/intern in Industrial Engineering, Logistics

Required Skills:

Knowledge of Lean tools and process mapping

Duration:

06 Months

Number of Interns:

02 Interns

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Internship opportunities

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Zone industrielle Ksar Hellal

Subject 12: Karakuri Transport System – Design of a Karakuri Transport System

Department : Production – Continuous Improvement – Maintenance

Description:

Design of a Karakuri transport system

Tasks:

- Study the current system
- Design a Karakuri device to supply workstations in the preparation area
- Measure the resulting efficiency gains

Profile:

Mechanical Engineering Student

Required Skills:

Mechanical design ; CAD proficiency (SolidWorks, AutoCAD, or similar)

Duration:

06 Months

Number of Interns:

01 Intern

Subject 13: Mobile Maintenance Application

Department : Maintenance

Description:

Mobile application to manage maintenance technicians' availability and simultaneously provide a dashboard for "Breakdowns, MTTR, MTBF.

Tasks:

- **Study the current system**
- **Design a mobile application**
- **Verify technicians' skills and availability**

Profile:

Engineering student with mobile/web programming skills

Required Skills:

Mobile Flutter

Duration:

06 Months

Number of Interns:

02 Interns

Subject 14 : KOSU Implementation

Department : Production – Quality – Continuous Improvement

Description:

Implement the KOSU method on a pilot project to improve overall performance

Tasks:

- Diagnose the current state
- Analyze waste
- Implement the KOSU method
- Measure results
- Standardize and sustain improvements

Profile:

Industrial/Mechanical Engineering student with Lean knowledge

Required Skills:

MS Office, Lean, Pareto and Ishikawa diagrams

Duration:

06 Months

Number of Interns:

02 Interns

Subject 15: Modernizing the existing work processes through digital tools using AR technologies to clarify data sets and workflows

Department : Research and Development

Description:

Our aim is to clarify intricate data sets and workflows, turning abstract information into easy and actionable insights,
allowing workers to interact with and understand complex data in a more intuitive way.

Tasks:

- Real- Time and monitoring
- Ineteractive content creation
- Predict workflow optimizations

Profile:

Student in Mechatronic or Electrical Engineering

Required Skills:

3D Modelling and animation, Knowledge of programming languages C#, C++, or Java

Duration:

06 Months

Number of Interns:

02 Interns

Subject 16: Development of a Comparative Analysis of Technical Drawings Using KBL Files

Department : Research and Development

Description:

Create a system or tool to analyze, compare, and extract key information from KBL (Keyline Binary Language) files to assist engineers and designers in reviewing and optimizing designs.

Tasks:

- Develop software for visualizing KBL files to aid in design understanding and review
- Implement a comparison function to allow users to compare multiple KBL files for design differences and improvements
- Extract meaningful insights from KBL files to support design verification and decision-making
- Ensure the tool offers value for design verification and continuous design improvement

Profile:

Student in Electrical or Industrial Computing Engineering

Required Skills:

programming languages like C#, C++

Duration:

03 Months

Number of Interns:

01 Intern

Subject 17: Design and simulation of an electrical system to evaluate the Impact of conductor cross-section area, wiring length, and material resistivity

Department : Research and Development

Description:

This project aims to design and simulate a low-voltage electrical system in order to analyze how conductor parameters specifically cross-sectional area, wire length, and material resistivity affect overall system performance. The study will focus on key electrical characteristics such as voltage drop, power loss, current-carrying capability, and thermal behavior under various operating conditions.

Tasks:

- Identify system requirements
- Review standards related to conductors
- Investigate existing simulation tools
- Define the electrical system architecture and model
- Create parametric simulations

Profile:

Student in Electrical Engineering

Required Skills:

MATLAB/Simulink, electrical knowledge

Duration:

06 Months

Number of Interns:

01 or 02 Interns

Subject 18: Design and Development of an Automatic Machine for Untwisting and Straightening Conductive Wires
Department : Engineering

Description:

The project aims to design and develop an automatic machine capable of untwisting (left-right rotation) and straightening twisted conductive wires.

Tasks:

- **Complete mechanical design of the system (guiding, driving, holding, and straightening mechanisms)**
- **3D modeling and sizing of mechanical and electromechanical components**
- **Programming of the automatic cycle (time management, left/right rotation, safety, emergency stop)**
- **Development of a functional prototype and experimental validation (cycle time, repeatability, straightening quality)**

Profile:

Mechanical, Mechatronics, or Electromechanical Enginee

Required Skills:

Mechanical design (SolidWorks or Autodesk Inventor)
Industrial automation (PLC, API, or microcontroller)
Sensors, kinematics, and machine safety

Duration:

06 Months

Number of Interns:

02 Interns

Subject 19: Automatic Grooved Tube Cutting Machine

Department : Engineering

Description:

This project aims to design an automatic machine for cutting corrugated tubes with high precision.

Tasks:

- Functional study and definition of the specifications
- 3D mechanical design of the machine using SolidWorks or Autodesk Inventor
- Sizing of mechanical components (guiding, transmission, motorization, sensors)
- Development of the automated control logic using Siemens PLC
- Simulation of the operation and optimization of the cutting cycle

Profile:

Mechanical, Mechatronics, or Electromechanical Enginee

Required Skills:

Mechanical design (SolidWorks, Autodesk Inventor)
Siemens PLC programming
knowledge of automation, sensors

Duration:

06 Months

Number of Interns:

02 Interns

Subject 20: Design of an Automatic Washing Tunnel for Industrial Boxes and Cups

Department : Engineering

Description:

This project involves designing an automatic washing tunnel for cleaning industrial boxes and cups. The goal is to develop a machine that provides fast, uniform, and water-efficient cleaning, while ensuring simple maintenance and robustness suitable for an industrial environment.

Tasks:

- **Functional study and specification drafting**
- **3D mechanical design of the tunnel using SolidWorks or Inventor**
- **Sizing of the washing circuit (pumps, nozzles, flow rate, pressure)**
- **Programming the Siemens PLC for automatic cycle management**
- **Study of the conveyor system and synchronization of washing steps**
- **Optimization of cycle time and water consumption**

Profile:

Mechanical, Mechatronics, or Electromechanical Enginee

Required Skills:

Mechanical design (SolidWorks, Autodesk Inventor) ; Hydraulic and kinematic studies
Siemens PLC programming ; Knowledge in automation and electromechanical integration

Duration:

06 Months

Number of Interns:

02 Interns

Subject 21: Wireless Technical Call Button System

Department : Industrial Maintenance - Engineering - Automation

Description:

The project involves designing and developing a wireless technical call button system for a factory.
This system will allow operators in four distinct areas to quickly send alerts to the maintenance team for rapid intervention in case of a breakdown or technical issue.

Tasks:

- **Electronic design of the four transmitters (call buttons) with an integrated LED and wireless radio module**
- **Development of the central receiver capable of receiving signals, indicating the originating zone via a display (LEDs or LCD), and triggering an audible alarm**
- **Programming of wireless communication (managing call point identification, anti-interference measures)**
- **Building a complete prototype and experimental validation under real conditions (range, reliability, battery life)**
- **Designing enclosures suitable for the industrial environment (protection against dust and moisture)**

Profile:

Mechanical, Mechatronics, or Electromechanical Enginee

Required Skills:

Embedded electronics (microcontrollers, radio modules) ; Programming (Arduino, ESP32, or equivalent) ; Knowledge of wireless communication (NRF24L01, LoRa, Wi-Fi) ; Testing and validation

Duration:

06 Months

Number of Interns:

02 Interns

Subject 22: Development of an innovative digital training platform

Department : Production

Description:

Create a platform for managing digitalized training modules in the industrial sector. It will include advanced features such as automated training reminders with acknowledgment tracking, immediate and long-term skills assessments, feedback through online surveys, and statistical dashboards with reporting tools for management.

Tasks:

- **Participate in the design and development of the platform (web/app) for both back-end and front-end**
- **Develop and integrate the automated reminders module with tracking**
- **Design the evaluation module (immediate and delayed quizzes, scoring)**
- **Implement user feedback interfaces and statistical analysis**
- **Document the project and the automated processes**

Profile:

Student in Computer Science, Software Engineering, or Information Systems

Required Skills:

Proficiency in web development (HTML, CSS, JavaScript, frameworks such as React, Angular, or Vue) ; Knowledge of databases (SQL/NoSQL)

Duration:

04 to 06 Months

Number of Interns:

01 or 02 Interns

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Internship opportunities

Sousse :
Zone industrielle Sidi Abdelhamid

Subject 23: Automatic check of EOL label

Department : Quality

Description:

Develop and implement a system to automatically verify the conformity of electrical testing labels.
The project aims to eliminate manual inspection errors, ensure correct label data (part number, batch, test date, OK/NOK status), and guarantee traceability compliance with customer and IATF 16949 requirements.

Tasks:

- **Study the current process of electrical label generation and printing**
- **Define control criteria (data fields, formatting, barcode accuracy)**
- **Develop a vision/control verification tool**
- **Test the solution in a pilot area (testing zone)**
- **Validate accuracy, reliability, and integration with aPIMS**
- **Create documentation (procedure, instruction, validation report)**

Profile:

Engineering student in Industrial Computing, Mechatronics

Required Skills:

Basic programming (Python, VBA, or LabVIEW) ;Understanding of vision systems and barcode reading ; Analytical thinking and data validation log

Duration:

06 Months

Number of Interns:

01 Intern

Subject 24: Implementation of Statistical Process Control (SPC) Charts for USS Machine

Department : Quality

Description:

Develop and implement a system to automatically verify the conformity of electrical testing labels.
The project aims to eliminate manual inspection errors, ensure correct label data (part number, batch, test date, OK/NOK status), and guarantee traceability compliance with customer and IATF 16949 requirements.

Tasks:

- **Identify critical process parameters**
- **Collect historical data from USS machines**
- **Develop control charts**
- **Define control limits and reaction plans**
- **Train operators and quality staff on SPC interpretation**
- **Validate the effectiveness through pilot implementation**

Profile:

Engineering student in Quality, Industrial Engineering, or Statistics

Required Skills:

Knowledge of SPC methods and MSA studies ; Use of Excel or statistical software (Minitab, JMP) ; Understanding of production processes ; Analytical and problem-solving mindset

Duration:

06 Months

Number of Interns:

01 Intern

Subject 25: Capability Study for Electrical Testing Table

Department : Quality

Description:

Evaluate and validate the measurement capability (Cp, Cpk) and repeatability of the electrical testing table used in final inspection.
This ensures the reliability of the test equipment and compliance with customer specifications and IATF 16949.

Tasks:

- **Map the testing process and identify key measurable parameters.**
- **Collect and analyze measurement data**
- **Perform capability study (Cp, Cpk) and MSA (Gauge R&R)**
- **Identify sources of variation and propose corrective actions**
- **Define acceptance criteria and periodic verification plan**
- **Document the results in a validation report**

Profile:

Engineering student in Quality or Industrial Engineering

Required Skills:

Knowledge of statistical analysis
Familiarity with electrical testing systems ;
Use of Excel, Minitab, or similar tools ;
Analytical rigor and documentation skills

Duration:

06 Months

Number of Interns:

01 Intern

Subject 26: Creation of an Automated Quality Dashboard

Department : Quality

Description:

Develop an automated digital dashboard to monitor key quality indicators (PPM internal/external, scrap rate, audit results, actions follow-up, 8D progress).
The goal is to reduce manual reporting time, improve real-time visibility

Tasks:

- **Identify key indicators and data sources (production, quality, maintenance)**
- **Define KPI calculation methods and visualization structure**
- **Develop an automated dashboard (Excel VBA, Power BI, or Python)**
- **Ensure data connection and update automation**
- **Validate the dashboard with end-users (Quality Manager, Production)**
- **Train users and prepare documentation**

Profile:

Engineering student in Quality, Data Analysis, or Industrial IT

Required Skills:

Excel (advanced formulas/VBA) or Power BI / Python ; Knowledge of IATF 16949 quality indicators ; Understanding of database logic and reporting automation ; Good communication and presentation skills

Duration:

06 Months

Number of Interns:

02 Interns

Subject 27: Implementation of the KANBAN System

Department : Logistics

Description:

Implementation of a Kanban system to improve workflow, reduce work-in-progress, and ensure faster, more visual replenishment.

Tasks:

- **Create and organize Kanban cards for products and production lines**
- **Link the Kanban process with physical inventory management**
- **Monitor performance and suggest improvements for workflow efficiency**

Profile:

Engineering student with knowledge in material request management.

Required Skills:

Knowledge of stock management and material flow processes.
Analytical and organizational skills

Duration:

06 Months

Number of Interns:

02 Interns

Subject 28: Conception and realization of Blindstpfen insertion Machine

Department : Engineering

Description:

This project aims to design, develop, and implement an automatic machine for the Blindstpfen insertion Process. Aiming at creating an automated system with precision, speed, and efficiency while ensuring the quality of the final products

Tasks:

- Feasibility study and machine design
- Create the electronic control system and specify the components such as motors, sensors, controllers, etc
- Develop control software for the machine and the automated system
- Implement safety devices and prepare comprehensive technical documentation,
- including user and maintenance manuals
- Train production personnel in the use of the system

Profile:

Engineer / Master´s student in Electromechanical

Required Skills:

Mechanicaldesign/control system design, C/C++

Duration:

06 Months

Number of Interns:

02 Interns

Subject 29: Conception and realization of Marking Machine

Department : Engineering

Description:

This project aims to design, develop, and implement an automatic machine for marking wires. The goal is to create an automatic system that ensuring the marking of wires speedy and with good quality.

Tasks:

- Feasibility study and machine design
- Create the electronic control system and specify the components such as motors, sensors, controllers, etc
- Develop control software for the machine and the automated system
- Implement safety devices and prepare comprehensive technical documentation,
- including user and maintenance manuals
- Train production personnel in the use of the system

Profile:

Engineer / Master´s student in Electromechanical

Required Skills:

Mechanicaldesign/control system design, C/C++

Duration:

06 Months

Number of Interns:

02 Interns

Subject 30: Design and implementation of a CIP software for managing continuous improvement ideas

Department : Continuous Improvement

Description:

Implement an ergonomic and secure software solution that covers the entire lifecycle of improvement ideas, from collection to the recognition of contributors.

Tasks:

- Database Design and Implementation
- Develop front-end forms for idea submission
- Implement back-end logic (scoring, workflows, points system)
- Create dashboards and reporting modules
- Security and User Management,
- Documentation & Training Support

Profile:

Software Engineer / Developer

Required Skills:

Programming knowledge (VBA/Excel, general web stack like HTML/CSS/JS, Python, or Java) ; Database design and management (SQL, relational databases) ; Basic understanding of workflow automation

Duration:

06 Months

Number of Interns:

01 Intern

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Internship opportunities

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Dhari route Soliman

Subject 31: Kanban Rack for Coils & Layout Modification

Department : Production – Cutting

Description:

Implementation of a Kanban system for coils and layout rearrangement following the installation of new machines (GS50 project).

Tasks:

- **Analyze current coil flow and storage**
- **Define Kanban requirements and dimensions**
- **Design the Kanban rack and updated layout (AutoCAD)**
- **Propose and validate improvement scenarios**
- **Support implementation of the Kanban system**

Profile:

Industrial Engineering Bachelor’s or Master’s student

Required Skills:

Lean, Kanban, AutoCAD, Excel

Duration:

06 Months

Number of Interns:

01 or 02 Interns

Subject 32: Implementation of a Kanban System for Production Line Supply

Department : Logistics - Production

Description:

This internship focuses on ensuring smooth and continuous supply for production lines by implementing a Kanban system. The intern will study component consumption, size line stocks, and design a visual or digital Kanban solution to prevent shortages.

Tasks:

- Analyze component consumption and production line needs
- Determine optimal line-side stock levels
- Design and implement a Kanban system (visual or digital)
- Define replenishment rules and workflows
- Test and monitor the Kanban system for effectiveness

Profile:

Industrial Engineering / Logistics student

Required Skills:

Kanban, Lean, Excel, ERP knowledge (SAP, M3, etc.)

Duration:

06 Months

Number of Interns:

01 Intern

Subject 33: Establishment of a Start-up Concept for the LAD Line

Department : Production

Description:

Define a clear and structured process for the start-up of the LAD production line.

Tasks:

- Analyze current LAD line start-up processes
- Define standard operating procedures for line start-up
- Balance workstations and calculate takt times
- Apply Lean tools and optimization techniques to improve efficiency
- Create process documentation and CAD layouts for implementation
- Support pilot testing of the new start-up concept

Profile:

Industrial Engineering

Required Skills:

Knowledge of Lean tools, takt time, MTM, workstation balancing, optimization techniques, proficiency in CAD

Duration:

06 Months

Number of Interns:

02 Interns

Subject 34: Modernizing the existing work processes through digital tools using AR technologies to clarify data sets and workflows

Department : Research and Development

Description:

Our aim is to clarify intricate data sets and workflows, turning abstract information into easy and actionable insights, allowing workers to interact with and understand complex data in a more intuitive way.

Tasks:

- **Real- Time and monitoring**
- **Ineteractive content creation**
- **Predict workflow optimizations**

Profile:

Student in Mechatronic or Electrical Engineering

Required Skills:

3D Modelling and animation, Knowledge of programming languages C#, C++, or Java

Duration:

06 Months

Number of Interns:

02 Interns

Subject 35: Finite Element Analysis of material and special element in our products within a defined geometric configuration.
Department : Research and Development

Description:

This project focuses on the application of Finite Element Analysis to optimize the design of our product within a predefined geometric environment. The main objective is to accurately determine wire parameters, evaluate appropriate material selections, and ensure the mechanical robustness and reliability of the harness under various operational conditions.

Tasks:

- Collect technical requirements for the cable harness
- Review relevant standards and material specifications
- Clean and simplify the geometry for simulation
- Generate mesh and perform mesh sensitivity studies
- Run initial simulations

Profile:

Student in Mechnnical engineering

Required Skills:

FEM, Ansys, 3D Modelling

Duration:

06 Months

Number of Interns:

01 or 02 Interns

Subject 36: Predictive Analysis of Production Defects in Automotive Wiring Harnesses

Department : IT

Description:

The main objective of this project is to develop predictive system capable of identifyingproduction defect risks in wiring harnesses.

Tasks:

- **Collecting and structuring production data from MES, ERP, and test benches**
- **Designing a machine learning model to predict defect probability for each production**
- **batch**
- **Creating a dynamic dashboard displaying key quality and performance indicators**
- **Providing predictive alerts to line supervisors for corrective actions**

Profile:

Master of Information Systems / AI Engineer Intern

Required Skills:

Data collection and storage: SQL Server, CSV exports, MES APIs; Data analysis and ML: Python (Pandas, NumPy, Scikit-learn) ; Documentation: GitHub, Jupyter Notebook.

Duration:

06 Months

Number of Interns:

01 Intern

Subject 37: Implementation of a Supplier Evaluation System

Department : Purchasing

Description:

This project aims to assess the performance of suppliers.

Tasks:

- **Analysis of the existing situation**
- **Creation of supplier evaluation processes**
- **On-the-ground Implementation of the process**

Profile:

Student in international business with knowledge in purchasing and logistics

Required Skills:

SAP, Advanced Excel

Duration:

06 Months

Number of Interns:

01 Intern

Subject 38: Determinants of Workplace Well-being Considering the Generational Gap: A Mixed-Methods Study

Department : Human Resources

Description:

This internship focuses on identifying the key factors influencing workplace well-being while considering the generational gap within the industrial context. The study will combine qualitative and quantitative methods based on industrial and organizational psychology theories to analyze differences in expectations between generations.

Tasks:

- Situation analysis & observation
- Planning and conducting semi-structured interviews
- Quantitative survey design and analysis
- Comparison of generational expectations
- Proposal of solutions to enhance workplace well-being

Profile:

HR Management; Psychology

Required Skills:

Knowledge in Management;
Foundations of Psychology

Duration:

06 Months

Number of Interns:

01 Intern

Subject 39: Financial Analysis of the Impact of the Crisis on the Automotive Sector

Department : Finance

Description:

Analyze the financial consequences of the current economic crisis on the automotive sector, including the impact on supply chain costs, volume reduction, budget revaluation, and transfer pricing adjustments.

Tasks:

- **Conduct a financial impact analysis of crisis-related risks on the automotive industry**
- **Evaluate changes in supply chain costs and production volumes**
- **Reassess budgets and financial forecasts**
- **Recalculate transfer pricing considering new economic conditions**
- **Provide recommendations to support financial decision making**

Profile:

Bachelor’s or Master’s degree in Finance / Management Information Systems / Bookkeeping

Required Skills:

Financial analysis and management control

Duration:

06 Months

Number of Interns:

01 Intern

Subject 40: Modality of Applying IAS 36 in the automotive sector in a crisis context

Department : Finance

Description:

The way in witch the companies in the automotive sector perform their asset reevaluation regarding IAS 36 in a context of uncertainty linked to the crisis in the automotive sector.

Tasks:

- **Describe the impact of the current crises on the financial statement of the automotive industry (sales, planification, Ebit, CAPEX,…etc);**
- **Reestimate the ability of the company to generate future Economic advantages accordingly to the duration of the used equipment;**
- **Concept the depreciation test of the Assets using the international standards : Fair value principle**
- **The way of depreciating Intangible Assets**

Profile:

Bachelor’s or Master’s degree in Bookkeeping

Required Skills:

Mastery of International Accounting Standards Board (IASB)

Duration:

06 Months

Number of Interns:

01 Intern

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