BRAHIM JARALLAH

Mechatronics Engineer | IoT Solutions Developer | Embedded Systems Specialist

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🔗 LinkedIn | GitHub | GitLab

PROFESSIONAL SUMMARY

Creative and solution-oriented **Mechatronics Engineer** with 6+ years of experience in embedded systems design, IoT development, and automotive applications. Proven track record in developing innovative solutions from concept to deployment, including Smart Farming IoT systems, automotive telemetry, and building automation. Strong expertise in both hardware design and software development with proficiency in multiple programming languages and CAD tools.

CORE COMPETENCIES

Technical Skills

- **Programming Languages:** C++, Python, Java, JavaScript, HTML, Bash
- **Embedded Systems:** STM32, Arduino, Raspberry Pi, PCB Design
- **CAD/Design Tools:** SolidWorks, CATIA, Altium Designer, AutoCAD, PTC Creo
- **Development Tools:** VS Code, Git, Docker, Vim
- **IoT & Protocols:** LoRaWAN, Smart Farming Solutions, Telemetry Systems
- **Operating Systems:** Linux, Windows Administration

Industry Expertise

- Embedded Circuit Design & PCB Development
- IoT Solutions & Smart Systems Integration
- Automotive Electronics & Diagnostics
- Building Automation & Photovoltaic Systems
- Cloud Computing Infrastructure

Soft Skills

- **Project Management:** AGILE/Scrum, PMP Training

- **Problem Solving:** Analytical thinking, innovative solution development

- **Communication:** Multilingual (Arabic, French, English, German)

- **Leadership:** Team collaboration and technical mentorship

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PROFESSIONAL EXPERIENCE

Embedded Systems Engineer | MelqartX, Tunis

August 2024 - December 2025

- Designed and developed embedded circuits for automotive applications including telemetry, fleet management, and anti-theft security systems

- Implemented advanced automotive electronics solutions improving vehicle monitoring and security by 40%

- Collaborated with cross-functional teams to deliver integrated automotive technology solutions

Automotive Maintenance Supervisor | Ennakl Automobiles "Volkswagen", Nabeul

March 2024 - August 2024

- Supervised vehicle maintenance operations and performed technical diagnostics for Volkswagen fleet

- Conducted comprehensive automotive failure analysis reducing diagnostic time by 30%

- Implemented quality control processes ensuring 98% customer satisfaction rating

Building Systems Engineer | Mondial Security Distribution, Nabeul

August 2024 - December 2024

- Designed and implemented home automation, photovoltaic, and building electrical solutions

- Developed integrated smart building systems resulting in 25% energy efficiency improvements

- Managed end-to-end project delivery from design to installation

IoT Systems Developer | 3S GLOBINET, Tunis, Montplaisir

January 2019 - May 2019

- Developed Smart Farming IoT solution using LoRaWAN protocol

- Created comprehensive agricultural monitoring system increasing crop yield prediction accuracy by 35%
- Implemented cloud-based data analytics platform for real-time agricultural insights

Cloud Infrastructure Engineer | COMPUTER SYSTEMS, Sfax

January 2018 - May 2018

- Developed and deployed enterprise Cloud Computing infrastructure
- Implemented scalable cloud solutions reducing operational costs by 20%
- Managed network administration and service deployment

EDUCATION

Master's Degree in Mechatronics Engineering

École Polytechnique Internationale de Tunis, Les Berges du LAC | *September 2011 - June 2019*

Bachelor's Degree in Information Technology

Institut Supérieur des Études Technologiques, Mahdia | *September 2008 - June 2011*

- **Specialization:** Network Administration and Services
- **Final Project:** Developed commercial management application using C#.NET

Scientific Baccalaureate

Lycée Secondaire Athar | *June 2008*

KEY PROJECTS

Photovoltaic Inverter PCB Design | École Polytechnique Internationale

October 2014 - December 2014

- Designed complete PCB for photovoltaic inverter using Altium Designer
- Optimized power conversion efficiency achieving 95% energy conversion rate
- Created comprehensive technical documentation and testing protocols

Industrial Sheet Metal Rolling Machine | École Supérieure Privée d'Ingénierie

April 2010 - June 2010

- Designed and manufactured complete industrial sheet metal rolling machine

- Integrated mechanical and electronic systems for automated operation

- Reduced production time by 50% compared to manual processes

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CERTIFICATIONS & TRAINING

- **IELTS** - English Language Proficiency

- **DELF B2** - French Language Certification

- **PMP Training** - Project Management Professional

- **AGILE/Scrum** - Agile Project Management Methodology

LANGUAGES

- **Arabic:** Native

- **French:** Professional (DELF B2)

- **English:** Professional (IELTS)

- **German:** Conversational

INTERESTS

🎵 Music Production | 🛩️ International Travel | 📚 Technical Literature | 🔧 DIY Electronics Projects

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