

# Sofiane Benmahiddine

Full-Stack Engineer

## PROFILE

With more than 6 years of experience in the field of software and electronics engineering (web applications, embedded systems, IoT, RFID devices...). The majority of the various projects that I realized were intended for the ministerial body such as the ministry of (defence, interior, youth and sports) as well as the ministry of culture, for which I carried out a project of digitization of central libraries in more than 10 different cities on national soil.

## PROFESSIONAL EXPERIENCE

### SPINTECHS | FULL-STACK ENGINEER

December 2016 – Present | Algiers, Algeria

- Analysis and understanding of product positioning and identification of customer need.
- Development of technical specifications.
- Design of solution architecture diagrams.
- Design and Modeling of products and modules to be developed.
- Supervision of development to ensure the proper functioning and compliance with deadlines
- Conducting the testing and validation phase.
- Leading technical implementations and software deployment.
- Maintenance and monitoring of solutions.
- Provide customer training and consulting.

### ICOSNET | FREELANCE IOT ENGINEER

January 2018 – June 2021 | Algiers, Algeria

- Design of connected objects used in the Smart Home.
- Development of firmwares adapted to the embedded systems architecture.
- Integration of a middle-ware operating as a local home automation server.
- Deployment of a cloud server allowing remote access and control.
- Expand the list of compatible devices.
- Integration of automation routines.

### HYUNDAI ENGINEERING AND CONSTRUCTION | IT ENGINEER

September 2015 – September 2016 | Sétif, Algeria

- Configuration and setup of hardware and/or software for computer systems and networks.
- Investigate and debug the malfunctions reported by users.
- Integration of new components while respecting the defined standards
- Performing scheduled preventive maintenance.
- Carry out regular updates and upgrades.
- Secure data and computer workstations.

## CONTACT

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## QUALITIES

- Methodical • Curious
- Good analytical skills
- Able to work under pressure
- Collaboration and Leadership
- Work independently or in a team
- Adaptation to constraints
- Problem solving

## SKILLS

### PROGRAMMING LANGUAGES

- Java • JavaScript • HTML • CSS • C
- SQL (PostgreSQL, MySQL)

### LIBRARIES/Frameworks

- Spring (Boot, MVC, Data, Security)
- Next.js • React • Redux
- Tailwind • Bootstrap

### DEVOPS

- Docker • Docker Compose
- Git • Gitlab • Jenkins
- Jira • AWS (IAM, EC2, S3)

### TOOLS

- VIM • IntelliJ IDEA • Arduino IDE
- EasyEDA

### OS

- Ubuntu (WSL, Server) • macOS
- Microsoft Windows

## LANGUES

- **ARABIC:** Native
- **FRENCH:** Advanced
- **ENGLISH:** Advanced

## EDUCATIONS

**FERHAT ABBAS UNIVERSITY** | MASTERS DEGREE IN COMPUTER SCIENCE

September 2013 - June 2015 | Sétif

Subject: Binarization of digital images and restoration of old documents

**FERHAT ABBAS UNIVERSITY** | BACHELOR DEGREE IN COMPUTER SCIENCE

September 2010 - June 2013 | Sétif

Subject: Operating principles of the GSM network and the different multiplexing and coding techniques in mobile telephony

**EL MOIZ HIGH SCHOOL** | SCIENTIFIC BACCALAUREATE

June 2010 | Sétif

## PROJECTS

**EAMS** | JAVA, SPRING(BOOT, DATA, SECURITY), JWT, POSTGRESQL, NEXTJS, REACT, CONTEXT API, CHARTJS, TAILWINDCSS, DOCKER, DOCKER COMPOSE, UBUNTU SERVER  
2022

An event management platform for the Ministry of Interior. Used during the Arab Summit 2022. Employing RFID technology for visitor access control and advanced security algorithms for data exchange between the different modules.

- Platform composed of 3 main modules: back-office, management station and control station.
- The back-office for event management, human resources and reporting.
- The management station is for the local management of the event, audit of operations and printing of visitors badges.
- The control station is for access control of the event using UHF RFID readers or PDA's manipulated by agents.
- Authentication and data transmission between workstations using secure USB keys.

**CVLJ** | JAVA, JASPERREPORTS, SPRING(BOOT, DATA, SECURITY), JWT, POSTGRESQL, NEXTJS, REACT, CONTEXT API, CHARTJS, TAILWINDCSS, DOCKER, DOCKER COMPOSE, UBUNTU SERVER  
2021

A summer camp management application for the Ministry of Youth and Sports.

- Management of camps, staff, volunteers and campers.
- Membership cards and certification management.
- Custom and configurable design for cards and certifications.
- Reporting and dashboards for different statistics in the form of tables and charts.

**ACCRÉDITATION** | JAVA, JASPERREPORTS, SPRING(BOOT, DATA, SECURITY), JWT, POSTGRESQL, NEXTJS, REACT, CONTEXT API, CHARTJS, TAILWINDCSS, DOCKER, DOCKER COMPOSE, UBUNTU SERVER  
2021

A platform used during the Mediterranean Games of Oran 2022 for the Ministry of Youth and Sports. Allowing the registration and management of various administrators, organizers, as well as the journalists participating in this event.

- Online application for journalists wishing to participate in the event.
- Internal management of human resources.
- Badge creation and printing module.
- Granular authorization system.
- In-depth reporting and statistics.

**MAKTABA** | JAVA, PHP , ANDROID, MARIADB, SPRING(BOOT, SECURITY), REACT, REACT ROUTER, REDUX, MATERIAL UI, DOCKER, DOCKER COMPOSE, UBUNTU SERVER  
2020

A library digitization solution for the Ministry of Culture. Based on RFID technology and deployed in more than 10 cities in the country.

- Solution composed of 5 modules: cataloging management and administration, inventory management, loans management, anti-theft module, and registration management.
- Design of an RFID encoder for automating entry operations for records and copies.
- Mobile application on PDA reader for inventory operations.
- Self service Kiosk application for loan and book return operations.
- Mobile application for automatic reader registration using OCR and NFC scanning of National ID card.
- Design of an RFID tracking gate deployed on the exits to prevent book theft.

**ICOSHOUSE** | JAVA, JAVA EE, MQTT, OPENHAB, C, FIRMATA, ESP8266, JAVASCRIPT, NODEJS, NODE-RED, RASPBERRY PI  
2019

Smart home design project for ICOSNET company

- Design of a local home automation server.
- Design of connected objects used in the smart home such as: Switch, TV/Air Conditioner remote control.
- Local control of objects using the MQTT protocol, and Remote control through a Private network.
- Progressive integration of local brands into the solution.
- Development of presetting functions for object behavior.

**CINEGATE** | JAVA, JAVA EE, JSF, PRIMEFACES, APACHE TOMCAT, MYSQL, RASPBERRY PI, DEBIAN  
2019

Access management project for movie theaters developed for the Ministry of Culture.

- Composed of 3 main modules: session management, ticket management, cashier management.
- Design of a middleware allowing the control of doors/tripods at the entrance.
- Identification of digital/paper tickets by QR Code reader.
- Local/Cloud ticket validation.

**STOCKMETRICS** | JAVA, INFLUXDB, GRAFANA, C, ATMEGA328P, ENC28J60  
2018

Real-time monitoring project for food storage warehouses. A solution developed for the Ministry of Defence.

- Capture of different physical parameters by electronic sensors.
- Collection of reports by UDP protocol to a local/cloud server.
- Alerts and notifications by email/SMS if predefined thresholds are exceeded.
- Development of an encryption algorithm based on AES allowing secure data exchange.
- Development of an application for sensors control, configuration and data visualization.

**MIRSAD** | JAVA, JAVA EE, JSP, JSTL, JAVASCRIPT, HTML, CSS, MYSQL, C, ATMEGA328P, SIM800, NEO-6M  
2017

Design of a box used in hive monitoring.

- Capture of different meteorological parameters.
- Collection of reports through the GSM network.
- SMS alerts in case of thresholds exceeding.
- Security mode to send the hive's GPS coordinates in the event of theft.
- Power saving mode for longer battery life and lower OEM emissions.