Hana Mettali

Software & Data Engineer

Tunis, Tunisia · +216 51 612 322
hana.mattali@gmail.com · linkedin.com/in/hana-mettali



At MPSI, I build tools that help electronics teams track boards through production, review their test histories and detect defects with computer vision. At DATA-ERA, I designed ETL pipelines and Power BI dashboards to analyse telecom subscriptions.

Professional experience

MPSI

Jul 2024 – present

Software & Data Engineer

- Led the migration from MySQL Server 5.1 to 8.1, using Apache Spark for large-scale data processing.
- Set up MySQL source-to-replica replication to keep data synchronised in real time.
- Extended TrackRepair with detailed PS5 board histories to help teams trace and investigate incidents.
- Automated network tests and web.config updates during deployment.

MySQL · Apache Spark · Python · .NET Framework · React · Git · Jira

DATA-ERA

Mar – Sep 2023

Software & BI Engineering Intern

- Designed ETL pipelines that transformed raw data and loaded it into SQL Server.
- Built multidimensional models and data marts to analyse fixed-line and mobile subscription trends.
- Created Power BI dashboards for telecom operator performance and integrated the BI solution into a Spring Boot and React application.

Python · SSIS · T-SQL · SQL Server · Power BI · Spring Boot · React

Technical skills

Programming	Python, JavaScript, C#, Java
Data engineering	Apache Spark, Airflow, ETL, SSIS, T-SQL, Pandas, Selenium, Beautiful Soup
Databases	MySQL, PostgreSQL, SQL Server, MongoDB
Web and applications	React, Angular, ASP.NET Core MVC, .NET Framework, Node.js, Spring Boot, HTML/CSS, Android
Vision and visualisation	OpenCV, YOLO, FastAPI, Power BI, Chart.js
Cloud and DevOps	AWS (S3, EC2, RDS), Docker, Kubernetes, Git, Jenkins, GitLab CI/CD

Projects delivered at MPSI

SuiviProduction

Built an ASP.NET Core 8 MVC application for the PS5, MCB, DS5 and Portal lines. Calculated achievement, quality, BER and scrap rates and gaps to target. Tracked downtime and rejects and integrated export counts from the DS5 API. Model-level detail views query the production databases directly. Cookie-based authentication controls access.

C# · ASP.NET Core 8 MVC · Entity Framework Core · MySQL · Razor · REST API

DS5 Tester Cloud

Developed and deployed a React frontend for serial-number lookup, test-station results and device logs. Added drift analysis, Chart.js visualisations, role-based access and CSV/PDF exports. Added advanced filters and operator management for the quality team.

React · Material UI · Ant Design · Chart.js · Axios · REST API

Visual board inspection

Processed images in real time with OpenCV and used YOLO to detect board components and defects. Exposed the services through FastAPI, stored results in MongoDB and displayed inspection indicators with Angular and Chart.js. Tracked the number of boards inspected, defect rates by type and pass/fail rates.

Python · OpenCV · YOLO · FastAPI · MongoDB · Angular · Chart.js

Academic projects

E-commerce application

Built a full-stack shop with authentication, product management, a shopping cart and order workflows through REST APIs.

React · Node.js · Express · MongoDB

Kooora Broadcast Tracker

Scheduled collection of match broadcast information, with screenshots, execution logs and timestamped CSV exports.

Python · Selenium · Beautiful Soup · Pandas

Education

Engineering degree in Computer Science, specialising in Software Engineering 2020 – 2023
SESAME University, School of High-Tech & Smart Data

Bachelor's degree in Computer Science 2014 – 2018
Faculty of Sciences of Bizerte (FSB)

Languages

Arabic, French and English