

# Sarra Ben Messaoud

## Software Engineer

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### Summary

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Software Engineering student passionate about AI and machine learning , with a strong backend development foundation. Known for curiosity, diligence, and motivation for continuous learning.

### Education

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**Software Engineering Cycle** 2022 - 2025  
Issatso (Higher Institute of Applied Science and Technology)

**Integrated Preparatory Cycle** 2020 - 2022  
Issatso (Higher Institute of Applied Science and Technology)

### Work Experience

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**Machine learning & Backend Developer, Olindias** Sep 2023 - May 2024 (Part-time), Jul - Sep 2024 (Full-time)

- Developed an intelligent search and recommendation system using Large Language Models (LLMs) like BERT and LLaMA, focusing on NLP for query understanding and user intent detection.
- Built and fine-tuned deep learning model to translate natural texts into NoSQL commands with 90.07 accuracy.
- Build Video Transcription service
- Contributed to backend development using Node.js and Python, enhancing the infrastructure for AI-driven applications.
- Deployed GPU- and CPU-compatible AI models, including NLP and recommendation systems, into production environments, optimizing resource utilization.
- Scraped and managed public and authorized private data from 2 different social media platforms to automate content and enhance user engagement in a management platform.

**Summer Internship, Olindias** Jul - Aug 2023

- Scraped data from fashion retailers, including Puma, American Eagle, and H&M.
- Developed an Ecommerce Recommendation System utilizing JavaScript.

### Projects

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- **University Platform:** Scalable website for ISSATSO University. *React.js, Node.js, MongoDB*
- **Sales Assistant Chatbot:** Chatbot for real-time customer support. *NLP.js, DialogFlow*
- **Sentiment Analysis Model:** Model for social media sentiment classification. *Python, PyTorch*

### Skills

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- **Generative AI, Machine Learning:** LangChain, LlamaIndex, LLM Models, Transformer Models, BERT, LLaMA, Python, PyTorch, Scikit-learn, OpenCv
- **Backend Development:** Node.js, Express.js, Flask, FastAPI, RESTful APIs, Microservices Architecture
- **Frontend Development:** React.js, Tailwind CSS
- **Data Management & Web Scraping:** MongoDB, MySQL, GraphQL, Puppeteer, Cheerio
- **Deployment & DevOps:** Git, Nginx, Process Managers (PM2, Supervisor, Gunicorn), Docker
- **Others:** Matlab, Linux, C/C++, Java, ElasticSearch, Vector databases

### Certifications

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**NVIDIA Certifications:** Building Transformer-Based NLP Applications / AI for Predictive Maintenance/ Fundamentals of Deep Learning.

### Extracurricular Activities

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**Marketing Manager, North America Tunisia Engineering Group** 2022 - 2023  
Coordinated and led a marketing team of 12 members for the organization.

### Languages

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English (C1), French (B1), Arabic (Native)