# Mohamed Hosni Selmi

Software Engineering Research Engineer Intern - Machine Learning Enthusiast

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🌐 https://my-portfolioo-hdzo.onrender.com

## Summary

**Final-year** Computer Science Engineering student with **Software engineering** specialization, eager to contribute to the development of innovative technologies and apply my theoretical and technical knowledge in a professional environment.

## Education

**National School of Computer Science (ENSI)**                                      **2021 – 2024**
*National Engineering Degree in Computer Science,specialty Software Engineering*                *University of Mannouba*

**Preparatory Institute for Engineering Studies of Tunis(IPEIT)**                    **2019 – 2021**
*Preparatory Cycle University Degree in Mathematics and Physics*                              *Tunis*

**Kairouan Pilot High School (LPK)**                                                 **2015 – 2019**
*Bachelor's Degree in Mathematics*                                                           *Kairouan*

## Experience

**Internship in DevOps**                                                    **June 2023 — Aug 2023**
*ADERFIA INC*                                                                     *Kairouan, Tunisia*

- Setting up microservices: Creating the required microservices using NestJS, with a focus on modularity and scalability.
- Database Management: Implementing MongoDB as the database for data storage, designing data schemas, and managing data access.
- Containerization with Docker: Creating Docker containers for the microservices and their dependencies, ensuring easier and reproducible production deployment.
- Build Automation with Jenkins: Setting up Jenkins to automate the source code build processes upon each change, including unit and integration testing.
- **Technologies:** NestJS, RabbitMQ, MongodB, Git, Jenkins, Docker.

**Web Development Internship**                                              **June 2022 — Aug 2022**
*Market 360 Degrees*                                                              *Tunis,Tunisia*

- Work on Specification Development and Project Planning.
- Designing and Developing Business Logic, Database Management, APIs, and Application Processing Workflows.
- Creating User Interface, Web Pages, Application Forms, and Features for Recruiters.
- Implementing Security Measures to Protect Sensitive Candidate Data.
- **Technologies:** ReactJS, NodeJS, ExpressJS, Elasticsearch.

## Projects

**Detection of an Unstable Electrical Grid**                                 **Jan 2023 - Mars 2023**

- Collaborated with my two teammates to develop a mobile application focused on predicting and detecting unstable electrical grids. Our solution was based on a dataset consisting of 10,000 observations.
- Used classification models to categorize the grid into different states, such as stable and unstable like: Support Vector Machines (SVM), Random Forests and Logistic Regression.
- Developed the API that served us to receive the signal of stability or instability every 3 seconds
- **Technologies:** Python, Matplotlib, TensorFlow, Flask, React Native.
- **Github:** , ○ HosniSelmi/Detection_Unstable_Electrical_Grid

**Versatile Service Platform**                                              **Sep 2022 - Nov 2022**

- Developed a platform that offers a variety of services to meet the needs of users. Whether you are looking for a professional for gardening, plumbing, repair services, or any other service.
- Implemented specific features to simplify the search for qualified providers, thus streamlining the decision-making process.
- **Technologies:** NodeJS, ExpressJS, React Native, Mongodb.
- **Github:** ○ HosniSelmi/Versatile_Service_Platform

**Password Manager**                                                        **Feb 2022 - May 2022**

- Developed a desktop password management application to help users enhance their online security
- Implemented CRUD functionalities: Account Creation, Account Reading, Account Updating and Account Deletion.
- Created a user interface for interacting with the password manager: Designing screens for adding, modifying, deleting, and viewing accounts.

- **Technologies:** Java, MySQL.
- **Github:** ⊙ HosniSelmi/Password_Manager

**Elevator Programming Game**                                                    **May 2022**
- Developed and implemented the Elevator Programming Game which is a challenging web-based application that puts your problem-solving and programming skills to the test.
- **Technologies:** JavaScript, HTML, CSS.
- **Github:** ⊙ HosniSelmi/Elevator_Programming_Game

## Honors

**ENSI**

*Best Team selected by the Jury*
  ∗ After an intensive three-month effort dedicated to our project, "Detection of an Unstable Electrical Grid," our team was lauded by the jury as the foremost team, assessed through criteria encompassing performance, innovation, and collaborative excellence.

**Deep Learning INDABA**

*Research Poster award*
  ∗ Received acclaim as an award recipient for a **research poster** that delved into advanced concepts in medical image segmentation, distinguishing itself among 120 other scholarly presentations.

**Deep Learning INDABA**

*Ideathon*
  ∗ Our groundbreaking project proposal was recognized among the winning projects at the Ideathon, underscoring our team's proficiency in conceiving and effectively presenting transformative concepts in the field of **deep learning**.

## Technical Skills

**Programing Languages:** Python, C/C++, Java , JavaScript, SQL.
**Frameworks/Libraries:** ExpressJS, NestJS, ReactJS, React Native, Flask, Spring Boot, Angular, Django.
**Developer Tools**: VS Code, Eclipse IDE.
**DBMS**: Oracle Database , Mysql, Mongodb, Elasticsearch.
**Data Visualization Libraries:** Matplotlib, Seaborn.
**Machine Learning Technologies:** Machine Learning, Deep Learning, Data Mining.
**Mathematics Knowledge:** Statistics, Probability, Linear Algebra, Graph Theory.

## Activities and Certifications

  ∗ Participated in the Tunisian Collegiate Programming Contest **TCPC** as a member of my team, and we were awarded certification for achieving the **11th** position out of a total of 80 participating teams.
  ∗ Successfully completed the DevOps training program accredited by **"Nana Janashia"** during the **"DevOps Bootcamp"** .
  ∗ Learned the basics of **machine learning and deep learning**(Coursera ).
  ∗ Organized the 5th edition of RoboCup ENSI, as well as the 16th and 17th annual ENSI events.

## Volunteer Experience

**ENSI**                                                                          **2023 − 2024**
*Student representative of the National School of Computer Science*
**Competitive Programming Club**                                                  **2022 − 2023**
*President of the ENSI Competitive Programming Club.*
**ENSI Chess Club**                                                               **2021 − 2023**
*Responsible for training at the ENSI Chess Club.*