

# Nour Haj Salem

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## EDUCATION

### Master of Computer and Information Science

Dearborn, MI

#### University of Michigan – Dearborn

2021 – Expected graduation Fall 2023

CGPA: 3.96/4.0

**Relevant courses:** Artificial Intelligence, Software Architecture and Design Patterns, Data Analytics in Software Engineering

### Master of Science in Engineering

Tunis, Tunisia

#### Mediterranean Institute of Technology

2018 - Expected graduation Fall 2023

CGPA: 3.37/4.0

**Relevant courses:** Object-Oriented Programming, Web Development, Data Structure and Algorithms, Database Management Systems

## PROFESSIONAL EXPERIENCE

### University of Michigan - Dearborn

Dearborn, MI

#### Research Assistant

Jan 2023 – Present

- Analyze comment changes in machine learning projects to help find the solution to automatize comments.
- Use Java, Maven, and Git tools to automatically extract the reasons behind updating comments from commit to commit using different machine projects well rated from GitHub.

### Tunisian Cloud

Tunis, Tunisia

#### Data Scientist Intern

May 2022 – Jul 2022

- Developed a web application with PostgreSQL for my database, python for the backend along with Flask to connect the front and the back, and HTML, CSS, and bootstrap for my front end to predict email validation.
- Collected data using Web Scrapping with Selenium and applied multiple machine algorithms mainly the decision tree to find out the one with the best accuracy. To be able to use manage the data and run the algorithms, I used NumPy, Seaborn and Scikit learn libraries.

### University of Michigan - Dearborn

Dearborn, MI

#### Research Assistant

Sep 2021 – Dec 2021

- Implement an intelligent and dynamic scheduler for software containers in edge devices in collaboration with Ford Motor company using search-based techniques such as genetic algorithms.
- Contributed to a research project by creating an Angular front-end to visualize real time containers metrics such as memory consumption, CPU, and network input/output usage using charts and graphs along with cAdvisor, Prometheus, and node exporter.

### L'Equipe Moderne

Tunis, Tunisia

#### Software Engineer Intern

Jun 2021 – Aug 2021

- Contributed to the code migration of the enterprise resource planning (ERP) from an old programming language Delphi to modern ones: Angular, Spring Boot, and MySQL.
- Managed car part inventory and employee data to ensure efficient resource utilization within the company.
- Implemented new features to the system and worked closely with the testing team to test and debug the code.

### MediaNet

Tunis, Tunisia

#### Software Project Manager Intern

Jul 2020 – Aug 2020

- Acquired in-depth knowledge of Agile methodologies to streamline project delivery as well as interacting with multiple project managers to learn about their experience.
- Gained knowledge about all the steps of building a website such as structure, zoning, benchmarking, A/B testing, and referencing.

### Youth Mediterranean Consulting at SMU

Tunis, Tunisia

#### Web Developer

Aug 2018 – May 2019

- Created multiple websites using HTML, CSS, Bootstrap, and WordPress for clients.
- Organized job fairs through organizations to provide job opportunities to students.

### University of Michigan - Dearborn

Dearborn, MI

#### Unions & Events Information Ambassador

Sep 2022 – Present

- Represents the UM-Dearborn and UUE professionally and courteously, providing a positive experience for all visitors.

## ACADEMIC PROJECTS

### Sentiment analysis

- Predicted the sentiment of a sentence based on training a dataset of 1.6 million tweets that we got from Kaggle.
- Performed data mining techniques and cleaned the data before applying the algorithms by visualizing the data, removing stop words, tokenization, stemming, and lemmatization. Then, used the word2vec algorithm to group words.
- Tried different machine learning algorithms and got the best accuracy with neural network algorithm.

### Web App "Stana Dawrek"

- Programmed the web app with MEAN Stack technology (MongoDB, ExpressJS, Angular, NodeJS). The goal was to help people get appointments for institutions such as municipalities during Covid time to prevent crowded places.
- Prepared an API to link the backend using HTTP requests with the front end.

## EXTRACURRICULAR ACTIVITIES

**Member:** Professional Co-ed Business Fraternity: Alpha Kappa Psi 2021-Present

- Attended and organized career development workshops.

**Member:** UNICEF 2021-Present

- Ensured that children have the essentials for a safe and healthy childhood through volunteering and fundraising.

**President:** Rotaract Carthage Amilcar 2020-2021

- Organized, prepared, and supervised 15 actions such as building homes for homeless families. Chaired the club and communicated with the team members while using the club's time efficiently and productively.

**Board Member:** Google Affiliate Developer Student Club of South Mediterranean University 2019- 2021

- Organized tech talks, events, and workshops while collaborating with others to accomplish these goals.

## SKILLS

**Programming Skills:** Java, HTML, CSS, Python, NodeJS

**Database management system:** MongoDB, PostgreSQL, MySQL

**Libraries:** NumPy, Scikit learn, TensorFlow, Pandas

**Frameworks:** Spring Boot, Flask, Angular

**Developer Tools:** Git, Visual Studio, Eclipse, Postman

**Operating Systems:** Linux (Ubuntu) and windows

**Languages:** Arabic (native), French(fluent), English (fluent)