

# AMIN BOUHAMED

IT Engineering Student

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## EDUCATION

### Higher School of Engineering and Technologies of Tunis

IT Engineering Student

Sep. 2021 – Now

Ghazela, Tunisia

### preparatory institute for pre-engineering studies of sfax

Mathematical and physics diploma

Sep. 2019 – Juin 2021

Sfax, Tunisia

### Mongi slim high school

Mathematics Baccalaureate with honor

Sep. 2015 – Juin 2019

Sfax, Tunisia

## EXPERIENCE

### 3S Startup

Backend Developer Intern

July 2023 – September 2023

Tunis, Tunisia

- Assisted in development of the Backend end of an online marketplace using Django , SQL server , MongoDB . optimized database queries, resulting in a 12% reduction in page load time and improved user experience.

Keywords : Django , Django , Pymongo , SSMS , MongoDB

### RDI research group ESPRIT

Data Science Intern

July 2022 – September 2022

ghazela, Tunisia

- As a part of a 2-members team I helped in developing a cutting-edge recommendation system for an online marketplace , 97% of accurate recommendations.

Keywords : Collaborative filtering , Content filtering , ML

## PROJECTS

### Facial Emotions Recognition | Python, Machine Learning, open-cv , Tensorflow, Keras

September 2023

Successfully Developed a facial emotion recognition system that can classify the 7 principal emotions from an image and a live webcam

- Developed and implemented a cutting-edge from scratch neural network architecture for emotion recognition using the "fer2013" dataset.
- trained model by using variants of layers and by varying hyperparameters. The best model was able to achieve 60.1% of validation accuracy

### Intelligent machine :Reverse vending machine | Python, Django, PostgreSQL, Computer vision

Mars 2023

Developed an intelligent Robot that sorts bottles and cans, identifies brands, and measures volume accurately.

secured the 3rd place out of 200 Best projects at esprit .

- Fine-tuned "centernet\_hg104.512x512" pre-trained model To Detect and classify inserted items , achieving an outstanding 95% detection accuracy, surpassing YOLOv7 by 2%.
- Fine-tuned a CNN model (InceptionV3) to identify brands with a remarkable 97% accuracy rate, enhancing the sorting process
- Generated a comprehensive dataset ,including height, width, and brand, derived from object detection results. fueled an Artificial Neural Network (ANN) model, achieving an impressive 98% accuracy in classifying bottle volumes.
- Developed a user-friendly Django-based web application, integrated with PostgreSQL, featuring real-time gamification System.

### Trend detection system | Python, Machine Learning, Selenium, BeautifulSoup, Sentiments Analysis

January 2023

Spreadheaded the development of an innovative social media trend extraction system. for the first Tunisian media (faza.tn)

- Proficiently scraped and collected real-time data from Twitter, serving as a valuable source for trend analysis and community engagement assessment.
- Utilized advanced statistical methods and machine learning models to identify and monitor emerging trends within social media platforms, 81% of trendy subjects successfully extracted.
- Transformed data into actionable insights to enhance the performance of our Models.

## TECHNICAL SKILLS

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**Languages:** Python, Java, C, SQL

**Developer Tools:** VS Code, Eclipse, Jupyter Notebook

**Technologies/Frameworks:** Linux, GitHub, Git, Docker, Latex, Django

**Libraries:** Pandas, Scikit-Learn, TensorFlow, Open-cv, NLTK, spaCy **Databases:** PostgreSQL, MongoDB, Microsoft SQL Server

## LEADERSHIP / EXTRACURRICULAR

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### Inceptum Junior Enterprise

Spring 2022 – Present

*Consultant*

*ESPRIT*

\* Senior Member of commercial development department at "INCEPTUM" junior enterprise.

\* Senior Member of project department at "INCEPTUM" junior enterprise.

### DeepFlow Club ESPRIT

December 2022 – January 2023

*Project Manager*

*ESPRIT*

\* Spearheaded a Team of 5 members, successfully delivered an AI project for our partner (Faza.tn)

## LANGUAGES

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• English

• French

• Arabic (native)