Mehdi Cherif

Software Engineering Student

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Education

National Institute of Applied Science and Technology — Tunis, Tunisia
Master's Degree in Software Engineering — *2022-2025*

National Institute of Applied Science and Technology — Tunis, Tunisia
Integrated preparatory Cycle — *2020-2022*

Experience

Software Engineer — 01/07/2023 - 01/08/2024
Technozor — *Tunis,Tunisia*

- Developed a web application designed to control an agricultural drone. This application facilitated precise and user-friendly operation of the drone, optimizing its functionality for agricultural tasks.
- Implemented Proportional-Integral-Derivative (PID) control algorithms for the drone's navigation system, ensuring stable and accurate flight paths during agricultural operations.
- Integrated a computer vision algorithm using YOLO to detect trees and farms, enabling the drone to navigate agricultural environments precisely.

Projects

'9anounGPT': a RAG chatbot that responds to inquiries about Tunisian law. currently working on

- Developed the chatbot powered by Retrieval-Augmented Generation architecture, using multiple LLMs.
- Integrated the chatbot into a website featuring a law forum for discussing legal matters.
- Implemented features allowing users to schedule appointments with lawyers directly through the website .

Real-time Tweets Sentiment Analysis and Emotion Detection

- Architected an end-to-end pipeline that provides powerful insights about any topic or product through real-time tweets sentiment analysis and emotion detection.

Tunisian Water Level Prediction

- Established a Time Series model that predicts the level of water in multiple dams around the Tunisian country.

CO2 Emission Prediction in Rwanda

- Developed a LightGBM regression model to predict CO2 emissions in Rwanda.This project explored data preprocessing, feature engineering, model selection, and evaluation techniques, culminating in a model that can be used to forecast future emissions.

Traffic Signal Optimization System

- Designed a project aimed at tackling the issue of time waste in traffic using computer vision with yolov5 and GRU optimizing the time duration of green lights depending on traffic intensity.

Aerobotix Website

- Created a website using React for a university club showcasing the club achievements and projects and its main axis.

Languages

English (Proficient), French (Proficient), Arabic (Native)

Achievements

First Place in Eurobot Qualification in Tunisia — 20/04/2023
Third Place in Data Overflow Data Science challenge — 30/04/2023
First place in NRW makeathon by Orange FabLab — 26/06/2023

Technichal skills

Programming Languages: JavaScript, Python, Java, C, C++, PHP
Web Frameworks: ReactJS, Angular, NestJS, Django, ROS, Tailwind,Bootstrap
Message Brokers: Apache Kafka, RabbitMQ
Developer Tools: Git, Docker, Kubernetes