# Ahmed Sta

Computer Science Engineer - AI Specialist

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## Professional Profile

**I** am a Computer Science engineer specializing in artificial intelligence and machine learning. My passion centers on generative AI and large language models, with a focus on harnessing their capabilities to address real-world challenges. Driven by a commitment to advancing AI research, I thrive on solving complex problems and developing innovative solutions that create meaningful impact across industries.

## Education

**National School of Computer Science (ENSI)** **2021 – 2024**

*National Engineering Degree in Computer Science, specializing in Data Science and Computer Vision* *University of Manouba*

**Preparatory Institute for Engineering Studies of Tunis(IPEIT)** **2019 – 2021**

*Preparatory Cycle Math-Physics* *University of Tunis*

## Experience

**Artificial Intelligence Engineer** **Dec 2024 — Present**

*Way Intersactive Convergence* *Nabeul, Tunisia*

- Developed an audio chatbot leveraging agentic AI to collect patient information, execute database integration functions, and automate healthcare workflows.
- Recording and transcribing consultations in real time to generate detailed diagnostic reports and provide recommendations to assist doctors in clinical decision-making.
- Finetuned and deployed a multimodal solution for medical analysis based on medical images.
- Deployed LLM solutions into production and integrated them into the developed website, ensuring optimal functionality and performance.
- **Technologies:** NLP, Generative AI, LLM, VLM, Agentic AI, Multimodal Learning.

**Machine learning internship** **Apr 2024 — Sept 2024**

*University of Moncton* *Moncton, Canada*

- Collected and analyzed historical breach and attack data.
- Preprocessed and prepared data for algorithmic analysis.
- Developed and implemented machine learning algorithms to predict breach risks and identify attack patterns.
- **Technologies:** Machine Learning, Ensemble Learning,Data analysis.

**Machine Learning internship** **Jun 2023 — Aug 2023**

*Fysali SAS* *Lille, France*

- Select and experiment with various NLP model architectures.
- Collect and preprocess a labeled dataset of medical consultation texts.
- Detect instances of violence or inappropriate behavior in gynecologist-patient interactions.
- **Technologies:** Machine Learning, NLP, HuggingFace, Transformers, BERT.

## Projects

**Stock Market Prediction Based on Sentiment Analysis** **Sept 2024 - Nov 2024**

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- Leveraged NLP techniques and LLMs to extract investor sentiment from financial articles for predicting stock trends.
- Designed classification models to forecast stock movements (rise, fall, stable) using textual and financial data.
- **Keywords:** Python, NLP, Sentiment Analysis, LLM. **Github:** Stock Market Prediction

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**PDF lifting Values** **Jan 2024 - Feb 2024**

- Designed and implemented a solution using Retrieval-Augmented Generation (RAG) to parse financial PDF reports by dividing them into chunks and context for fine-tuning LLMs.
- Utilized LLMs for text generation, extracting specific metric values from the reports with high accuracy.
- Focused on improving the precision of financial data extraction by fine-tuning the models on the parsed content.
- **Keywords:** NLP, LLMs, PDF Parsing, RAG **Github:** PDF lifting Values

**JobLinker** **Aug 2023 – Oct 2023**

- Develop and implement a resume parsing system using NLP techniques to extract key information such as skills, Name, Github, Linkedin and Email.
- Developed an unsupervised learning-based scoring model to match candidate profiles with job offers by analyzing skills, experience, and qualifications.
- Build a backend infrastructure using Django.
- **Keywords:** Python, NLP, Spacy, Django, Data Scraping. **Github:** STAAHMED11/JobLinker

**Disease Detector** **Jan 2023 - May 2023**

- Design and implement deep learning models for disease detection.
- Fine-tune and optimize the algorithms to improve accuracy, reduce false positives, and enhance overall performance.
- Integrate the disease detection algorithm into the web application.
- **Keywords:** Deep learning, Computer vision, CNN, Flask, Python. **Github:** STAAHMED11/Disease-Detector

**B-Bet** **Jun 2022 - Aug 2022**

- Develop meaningful features that can enhance the accuracy of predictive models.
- Build machine learning algorithms capable of predicting match outcomes based on historical data.
- Create interactive and informative data visualizations to present match statistics and predictions to users
- Design and develop a user-friendly web platform where users can access predictions and view visualizations.
- **Keywords:** Python, Machine Learning, Plotly, Web Development **Github:** STAAHMED11/B-BET-Website

## Honors

### Unifi Value Frameworks PDF Lifting Competition

*Earning a Gold Medal.*

- Developed an LLM-based solution to parse PDFs of annual reports, extracting predefined sustainability metrics for Unifi.

### Landslide Prevention and Innovation Challenge

*Earning a Gold Medal.*

- Developing an AI-powered system for landslide identification with the purpose of enhancing landslide prevention and management.

### Antibiotic Resistance Detector Challenge by IndabaX Tunisia 2022

*Earning a Gold Medal.*

- The challenge entails constructing a classifier capable of identifying Antibiotic Resistance Genes (ARGs) from genetic sequences a determining their antibiotic resistance status.

## Technical Skills

**AI Expertise:** Machine Learning, Deep Learning, Computer vision, Natural Language Processing, Time Series Analysis ,Supervised Learning, Unsupervised Learning, Data Analysis, Large Language Models, RAG, Agentic IA ,Agentic RAG
**AI Development Tools:** TensorFlow, OpenCV, Pytorch, Keras, NLTK, SpaCy, Transformers, Gensimn, Pandas, Numpy, Scikit-learn, HuggingFace, LangChain, LLamaIndex, Ollama ,OpenRouter
**Web Development Tools:** React, Django, Flask, Bootstarp
**Data Visualization Libraries:** Matplotlib, Seaborn, Plotly
**Developer Tools:** Git/GitHub, VS Code, Azure, GCP
**Programming Languages:** Python, C, C++, R, Java, JavaScript