Malak AIDI

Software Engineering Student : AI & ML and Data Science Specialist

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SUMMARY

Freshly graduated Software Engineer from École Polytechnique de Sousse, with a strong passion for Artificial Intelligence, Machine Learning, and Data Science. I've gained hands-on experience through academic and professional projects involving voice assistants, sign language translation, and intelligent systems. I'm eager to apply my skills to real-world challenges and contribute to impactful, AI-driven solutions

SKILLS

Hard Skills

- **Programming Languages :** Python
- **Machine Learning** : Supervised & Unsupervised Learning, Deep Learning, Model Evaluation
- **Artificial Intelligence** : Neural Networks, Natural Language Processing (NLP), Computer Vision, Speech Recognition
- **Data Analysis** : Data Cleaning, Exploratory Data Analysis (EDA), Statistical Analysis
- **Data Visualization** : Power BI, Matplotlib, Seaborn
- **Frameworks & Libraries** : TensorFlow, Keras, Scikit-learn, PyTorch
- **Big Data Technologies** : Hadoop, Spark
- **Data Manipulation** : Pandas, NumPy, SciPy
- **Version Control** : Git, GitHub, BitBucket

Soft Skills

- Leadership
- Time management
- Communication
- Adaptability
- Problem-Solving
- Team Collaboration

CERTIFICATIONS

- **IT Specialist – Artificial Intelligence:** Certiport
- **Applications of AI for Predictive Maintenance :** NVIDIA
- **Building Transformer-Based Natural Language Processing Applications :** NVIDIA
- **Fundamentals of Deep Learning :** NVIDIA
- **Exploratory Data Analysis for Machine Learning :** IBM
- **Machine Learning with Python :** IBM
- **AI-900 : Microsoft Azure AI Fundamentals :** Microsoft Azure
- **IT Specialist – Python :** Certiport
- **IT Specialist – Database :** Certiport

PROJECTS

- **AI-powered voice-guided room booking system :**
  - Designed and developed a smart room booking assistant that allows users to make hotel reservations through natural voice commands using speech recognition and AI-based intent understanding.

  Tool Used : Python, FastAPI, Whisper, gTTS, NLP, Docker, React.

- **American Sign Language Translation to Text :**
  - Designed to detect and translate ASL gestures into text by leveraging hand landmark detection and deep learning techniques, enabling seamless communication for the hearing-impaired community.

  Tool Used : Python, OpenCV, MediaPipe, TensorFlow, Keras, LSTM, CNN models, Tkinter.

- **Correctly :**
  - Created a web application offering NLP functionalities, including grammar and spelling correction, language detection, and bidirectional Arabic-English translation. Developed a feature for uploading and downloading corrected PDF documents, ensuring accessibility and precision in text analysis.

  Tool Used : Python, Flask, NLP libraries (SpaCy, TextBlob, NLTK), Transformer, PyPDF2 (for PDF handling).

- **Facial Recognition Model :**
  - Developed and implemented a facial recognition system using machine learning algorithms, enhancing real-time facial feature identification.

  Tool Used : Python, Google Colab, Kaggle.

- **Twitter Sentiment Analysis :**
  - Created a sentiment analysis model to categorize Twitter comments into positive, negative, or neutral sentiments, improving social media insights.

  Tool Used : Python, Google Colab , Kaggle.

- **Agriculture & Livestock Tax Analysis :**
  - Scraped and collected tax data from websites across North African countries, ensuring data accuracy and comprehensiveness.
  - Visualized data using Power BI to explore differences in tax structures between nations and extract actionable insights.

  Tool Used: Python, Google Colab, Power BI, Web Scraping, Data Processing.

- **Celestial Navigation for Drones :**
  - Initiated a project focused on developing a celestial navigation system, enabling drones to self-position using celestial bodies instead of GPS.

  Tool Used: Research & Development, Image Processing, AI/ML Techniques.

EXPERIENCES

Feb 2025 – Jun 2025 (End-Of-Study Internship)   QuickText
  - Developed an AI-powered voice-guided room booking system enabling users to interact and make reservations through natural voice commands.

  Technical Environment: Speech Recognition, Natural Language Processing, FastAPI, AI/ML.

Sept 2024 – Oct 2024 (Summer Internship)   SARAB Unmanned Systems
  - Conducted extensive research on star systems and celestial theories to support the development of an AI and ML model for celestial navigation.

  Technical Environment: Research & Development, Image Processing, AI/ML Techniques.

Jun 2024 – Aug 2024 (Summer Internship)   **DNEXT Intelligence SA**
- Analyzed agricultural and livestock import/export taxes across North African countries, including Tunisia, Egypt, Algeria, and Morocco.
- Gathered and processed reliable data from various sources to support comprehensive analysis.

Technical Environment: Power BI, Data Scraping, Data Analysis.

- **Jun 2024 – Jul 2024 (Virtual Internship)**   **InternCareer**
  - Applied natural language processing (NLP) techniques to perform sentiment analysis on Twitter comments, providing insights into user emotions and feedback.

  Technical Environment: Python, Google Colab , Kaggle, NLP.

- **Aug 2023 – Sept 2023 (Summer Internship)**   **ARSII Association**
  - Gained hands-on experience in building and deploying AI-based systems, particularly facial recognition models.

  Technical Environment : Python, Google Colab, Kaggle, AI & ML.

EDUCATION

- Engineering Cycle : Computer Engineering (École Polytechnique de Sousse)   Sept 2022 – Jun 2025
- Bachelor's Degree : General Physics (Ecole Sup des Sciences et technologies de HS)   Sept 2019 – Jun 2022
- Baccalaureate : Experiemental Science (Lycée Jawhra Sousse)   2019

AWARDS & ACHIEVEMENTS

- **2025 : Twise Night Challenge By ARSII**

Awarded First Place in the **'Building a Smart Learning Companion for Students'** challenge presented by the startup **ClassQuiz**.

- **2024 : AI Night Challenge, 3rd Edition By ARSII**

Awarded First Place in the **'SkillSynergy'** challenge presented by the startup **JuniorsCV**.

- **2024 : AI Night Challenge, 3rd Edition By ARSII**

Awarded First Place in the **'AI Visionary Challenge : Transforming Moments into Motion at Pristini School of AI'** presented by **Pristini Language and Training Institute**.

LANGUAGES

- **English :** Level C1 (EF Set Certificate)
- **Frensh :** Level B2 (DELF Certificate)
- **Deutch :** Basic

CLUBS & ACTIVITIES

- **2024 :** Executive Member at « **ACM EPS** » (Vice-chair)
- **2023 / 2025:** Logistics Manager at « **TCPC 2023 / TCPC 2025** »
- **2023 :** Executive Member at « **ACM EPS** » (General Secretary, HR Manager)
- **2023 :** Executive Member at « **We Lead Club** » (HR Manager)
- **2022-2024 :** Executive Member at « **IEEE EPS SB** » (Treasurer, General Secretary)
- **2022 :** Active Member at « **ARSII** »
- **2022 :** Active Member at « **GDSC EPS** »