Mahmoud Khalil

Data Scientist

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EDUCATION

- **42 Abu Dhabi Coding School**
  Completed Piscine (bootcamp) and five core Cursus projects between March 2022 and June 2023.
- **MSc in Electrical and Computer Engineering**
  Khalifa University, UAE
  Jan 2018 – Dec 2019
  GPA: 3.67/4
  Thesis: Using Machine Learning in Detection of Space Debris
- **BSc in Electrical Engineering**
  United Arab Emirates University, UAE
  Feb 2013 – May 2017
  GPA: 3.87/4

SKILLS

- **Programming Languages:** Python, C, C++, Java, HTML, CSS, JavaScript, SQL, Bash, Git.
- **Data Science Libraries:** NumPy, Pandas, scikit-learn, Matplotlib, TensorFlow.
- **Software:** MATLAB/Simulink, Arduino.
- **Language:** Arabic, English

CERTIFICATES

- **Front-End Diploma** *Almdrasa.com*
- **Artificial Intelligence** *Samsung, UAE*
- **Data Analysis** *Udacity.com*

EXPERIENCE

DATA SCIENCE ENGINEER

Khalifa University, Abu Dhabi, UAE | Jan 2024 – Present

- Collect a diverse dataset of medical educational videos.
- Implement a speech-to-text system to transcribe spoken content from the videos.
- Develop NLP algorithms to analyze transcribed text and extract relevant information.
- Integrate a Large Language Model (LLM) to generate contextually relevant content summaries.
- Design a web interface allowing users to interact with the videos, ranked based on relevance and quality.

APPLIED MATHEMATICS TEACHER

Emirates Schools Establishment, UAE | Mar 2020 – Dec 2023

- Taught Algebra, Probabilities, Statistics, Trigonometry, and Calculus to Elite-stream students in high school.
- As Coordinator of PLC meetings, facilitated collaborative discussions, positively impacting 80% of participating teachers.
- Achieved an 8% increase in students' scores on MAP standardized test in Fall 2023 compared to the previous academic year.

MACHINE LEARNING RESEARCH ASSISTANT

Khalifa University, Abu Dhabi, UAE | Jan 2018 – Dec 2019

- Assembled a real light curve time-series dataset containing 16,193 entries of space objects, distinguishing it from simulated datasets.
- Analyzed the dataset, and extracted 53 meaningful features using advanced statistical techniques.
- Developed and optimized Machine Learning models (SVM, Decision Tree, Random Forest, k-NN, and ANN) in Python and MATLAB to detect space debris.
- Reduced feature dimensionality by 80%, and applied oversampling for dataset balance, enhancing model precision by 74%.
- Published results in 2 conference papers.