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OBJECTIVE

Junior student passionately pursuing a Bachelor's in Computer Software Systems Engineering, I am eager to leverage my academic foundation, hands-on experiences, and enthusiasm for technology to contribute effectively to a dynamic and innovative team. Seeking opportunities to apply and expand my skills.

EDUCATION

Bachelor of Computer Engineering and Software Systems

Sep. 2021 – 2026

Faculty of Engineering Ain Shams University

WORK EXPERIENCE

Deep Learning Researcher

November 2023 – Present

ASU Racing Team

Cairo, Egypt

- Contributing to the ASU Racing Team's success in Kaggle competitions
- Applying deep learning algorithms to improve the team's performance in various autonomous vehicle competitions

Machine Learning Engineer Intern

November 2023 – December 2023

Cellula Technologies

Cairo, Egypt

- Led a high-performing team in the development of Taxi Fare Prediction
- Used Classification techniques as DecisionTrees, KNN, RandomForest & Logistic Regression
- Used Regression techniques as DecisionTreesRegressor, RandomForestRegressor & XGBoostRegressor
- Achieved high accuracy & low MSE

Full Embedded Systems Diploma

July 2023 – November 2023

Edges For Training

Cairo, Egypt

- Mastered the basic concepts of Embedded Systems, demonstrating a solid understanding of core principles
- Interfaced with AVR Micro-controllers, developing drivers for various peripherals
- Mastered the fundamental concepts of Embedded C
- Acquired knowledge of Real Time Operating Systems (RTOS)

AI Intern

July 2023 – August 2023

Telecom Egypt

Cairo Egypt

- Learned About Neural Networks & Worked with Keras, Tensorflow & NumPy
- Knew CNN Architecture & difference between ANN & CNN
- Used Pre-Trained models like MaskRCNN for Object detection & instance segmentation

PROJECTS

— AI & Data Science —

Image Generation Using GANs | cGANs, cDC-GANs, cW-GANs, streamlit, PyTorch

May 2024

Ain Shams University

- Understood different GANs architecture such as GANs, DCGANs WGANs
- Worked on the generation of boot-sandal-shoes images using conditional GANs
- Made Comparative Analysis on the different architectures used comparing them in terms of FID the quality of images generated

IBM Data Science Capstone | *NumPy, Pandas, matplotlib, SQL, scikit-learn, Folium, Dash* January 2024

IBM Data Science Coursera

- Predicted if the Falcon 9 first stage will land successfully
- Used Folium to visualise launch sites
- Created a web visualisation page using Plotly Dash

Taxi Fare Prediction | *NumPy, Pandas, matplotlib, scikit-learn* December 2023

Cellula Technologies

- Predicted the fare amount in New York City
- Deployed the model Using Django

Instance Segmentation | *Python, NumPy, TensorFlow, Keras, Pixellib* August 2023

Telecom Egypt

- Identify all objects in the TahrirSquare video using Pixellib
- Segment only cars and count cars in each frame of the video using OpenCV and Pixellib
- Using MaskRCNN Pre-Trained Model

Face Recognition and Audio Gender identifier | *cv2, pyaudio, librosa* March 2023

Project Day STP

- Used Pyaudio in recording Voice
- Used SVM algorithm in the Face Recognition

— Software Applications —

Criminal Investigation Database System | *SQL, pyodbc, PyQt* April 2024

Ain Shams University

- Integrated Database with Python interface using pyodbc library
- Understood and applied database concepts such as creating ERD Diagram and converting it to Schema

VeriGuard - Verilog Linter | *Python, Verilog* December 2023

Ain Shams University

- Python-based VeriGuard Lint Parser implementation.
- handled various cases such as Arithmetic Overflow, Unreachable Blocks, Un-initialized Register, Multi-Driven Bus/Register, Non Full/Parallel Case, and Infer Latch.

ATM Verilog | *Verilog* December 2023

Ain Shams University

- Developed Verilog implementation of ATM system, encompassing fundamental functionalities of a real-world ATM.
- Designed to simulate basic operations and interactions expected within an ATM system.

HappyTails Vet Profile System | *HTML, CSS, JavaScript, Django* December 2023

Ain Shams University

- Web application for efficient pet health record management and veterinary appointments.
- Utilized Agile development methodology.
- Involved in the design process, requirements analysis, and modeling (use-case, swimlane, sequence, class diagrams).

Video Player | C++, OpenCV

December 2023

Ain Shams University

- Implement Double Circular Linked List Data Structure for holding videos.
- Used OpenCV for playing videos.

— Embedded —

Door Locker Security Systems | C, AVR

November 2023

Edges For Training

- Developing a system to unlock a door using a password

Stop-Watch — Fan Speed Controller with Temperature — Distance Measuring System

October 2023

Edges For Training

- Developing a system that control the stop-watch time and display it on 7-segments
- Developing a system that controls the speed of a fan depending on the temperature
- Developing a system that measure the distance and display it on LCD

TECHNICAL SKILLS

Programming: Python, C, C++, Java, SQL, OOP, HTML, CSS, JavaScript, Django, Flask, Verilog

Data Science: Pandas, NumPy, Matplotlib, Seaborn, Plotly, One-Hot Encoding, Label Encoding, EDA, SQL, Feature Selection & Feature Engineering.

Machine Learning: Regression, Classification, SVM, Decesion Trees, RandomForest, Sci-kit Learn.

Deep Learning: ANN, CNN, GANs, DC-GANs, W-GANs, PyTorch, Tensorflow, Keras, OpenCV.

Embedded Systems: Embedded C, Microcontroller Interfacing, RTOS, AVR, ARM.

Version Control: Git, GitHub

CERTIFICATES

IBM Data Science Professional Certificate

January 2024

IBM

Machine Learning Specialization

July 2023

DeepLearning.AI

Machine Learning Workshop

March 2023

STP

EXTRACURRICULAR ACTIVITIES

Multimedia Designer

November 2022 – June 2023

IClub

Cairo Egypt

- Creating Desgins for IClub's Facebook Page