

Mostafa Shanab

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Education

Ain Shams University

Sep. 2021 – 2025

Faculty of Computer and Information Science

Bachelor of Computer and Information Science (CGPA: 3.742, A-)

Cairo, Egypt

Courses

Information Technology Institute

July 2024 – August 2024

Full Stack PHP Training

Cairo, Egypt

- Learned CSS, HTML, JavaScript, PHP, Bootstrap.
- Took a lot of Tasks, Quizzes, Assignments and Project at the last to make a full website has front-end and back-end.
- Learned all required information and skills to build a fully responsive website and deal with data at back-end through APIs.
- Using all this information in real-life applications.

Projects

Deep Learning-Based Image Segmentation for Object Recognition / Python, Keras, Git, etc.

Jan. 2025

- Developed and implemented UNet, SegNet, and DeepLab for image segmentation and object recognition tasks.
- Trained and fine-tuned models, achieving high accuracy in region clustering and object detection.
- Evaluated performance using metrics like IoU (Intersection over Union), Dice coefficient, pixel accuracy, and mean precision-recall.
- Compared model efficiency and accuracy, selecting the best architecture for specific use cases.
- Optimized models for improved computational performance and faster inference times.

Forum Discussion Classification using Deep Learning and Transformers / Python, NLTK, etc.

Jan. 2025

- Developed a deep learning model using LSTM, CNN, and transformers (BERT) to classify forum discussions into categories.
- Processed text data using NLP techniques (tokenization, stemming, Word2Vec) and achieved high accuracy with metrics like precision, recall, and F1-score.
- Fine-tuned transformer models (e.g., BERT) for contextual understanding and improved classification performance.
- Conducted EDA (Exploratory Data Analysis) to analyze text patterns, visualize word distributions, and address dataset imbalances.
- Utilized TensorFlow, PyTorch, and Hugging Face for model development, training, and deployment.

E-Commerce Website / HTML, CSS, JavaScript, PHP, MySQL, XAMPP/WAMP (local server), Git, etc.

Sep. 2024

- Developed a fully functional e-commerce website with both frontend and backend integration.
- Designed the frontend using HTML, CSS, and JavaScript for a responsive and user-friendly interface.
- Built the backend using PHP to handle data processing, user authentication, and product management.
- Connected the website to a local server for data storage and retrieval using MySQL.
- Implemented features like product search, cart management, and user registration/login.

Borrows Wheeler Compression / C#, Visual Studio

May 2024

- Developed all steps of Borrows Wheeler algorithm Compression and Inverse that text Compressed and Decompressed.
- Used Concepts of Algorithms Analysis & Design to implement efficient algorithms designs for Compression and Decompression.
- Used Divide & Conquer Design and Transformation and others , we received full marks for this project and bonuses.

Apartment Rent Prediction / Python, PyCharm, Jupyter

May 2024

- Created a Model that can predict Apartment Rent based on specific features.
- Preprocess data first: handling Nulls, scaling, normalizing, etc. then train model then use model to predict another unseen data.
- Did Hyperparameters Tuning to achieve better accuracy and tried so many models to know which one makes better accuracy.
- Applied Classification and Regression Models in it as target Column was first Continuous then in 2nd phase was Discrete.
- Ranked 3rd Place in the Competition during Machine Learning Course among more than 100 Teams.

Sentiment Analysis / Python, PyCharm, Jupyter

May 2024

- Created Models to Classify Movie Review as Positive or Negative based on NLP Techniques & Machine Learning Algorithms.

Certificates

Software Engineer Intern / 2024
HackerRank role certification test

Machine Learning / 2024
ML Competition (3rd Rank)

Full Stack PHP Training / 2024
Information Technology Institute