Ali Ayman Soliman

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PROFILE

   Passionate and eager Data Scientist with a strong foundation in AI, machine learning, natural language processing, computer vision, craving to implement the tools, skills, and concepts he acquired, further develop his skill set and explore the practical horizons of Data Science field.

EDUCATION

Postgraduate Diploma of AI-Pro, 9-Month Program   Oct. 2024 – Aug. 2025

Information Technology Institute (ITI), Egypt | EPITA School of Engineering and Computer Science, France

The program core focuses on ML pipeline, starting from data ETL, all the way to model selection, hyper-parameter tuning, and validation. Moreover, the program includes additional courses related to big data, AWS services, etc.

B.Sc. in Artificial Intelligence   Sep. 2020 – Jul. 2024

Egyptian Russian University, Egypt

- Ranked 7th in Class.

WORK EXPERIENCE

Teaching Assistant (Full Time)   Oct. 2024 – Present

Faculty Of Artificial Intelligence (Egyptian Russian University), Cairo, Egypt

- Assisted in delivering Machine Learning and Deep Learning courses, including lectures, labs, and assessments.
- Guided students through practical projects and hands-on assignments to reinforce theoretical concepts.
- Supported students in understanding core AI topics, Improving their problem-solving skills.

Insructor (Part Time)   June. 2024 – Oct. 2024

YAT (Digital Egypt CUBS), Cairo, Egypt

- Instructed courses on AI, mobile app development, and web development.
- Guided students through various topics and practical projects, enhancing their understanding in these fields.

RELEVANT PROJECTS

Document Clustering Project   **Project Repo**

Project aims to apply unsupervised learning techniques to cluster documents from two datasets: the People Wikipedia Dataset and the 20 Newsgroups Dataset.

- **Models:** K-means - Agglomerative clustering - PCA - Doc2Vec - TF-IDF
- **Tools:** Python – NumPy – Pandas – SciKit-Learn – Seaborn - NLTK

Obesity Classification Project   **Project Repo**

Project to classify individuals based on obesity levels using health and lifestyle data. Applied preprocessing, feature selection, and various classification algorithms to achieve high accuracy and interpretability.

- **Models:** LightGBM Classifier - Decision tree - KNN
- **Tools:** Python – NumPy – Pandas – SciKit-Learn – Seaborn - Streamlit

Hate Speech Classification Project   **Project Repo**

NLP project focuses on building a robust hate speech classification system can detect and differentiate between hate speech, offensive language, and neutral content.

- **Models:** Logistic regression - Decision tree - SVM - RNN - LSTM - GRU
- **Tools:** Python - Pandas - SciKit-Learn - Plotly - NLTK - Tensorflow - Streamlit - GloVe - Fast-text - TF-IDF

Build Transformer & BERT from Scratch   **Project Repo**

Built Transformer and BERT models from scratch to understand each component, including architecture, attention mechanisms, and positional encoding, for translation tasks.

- **Models:** BERT - Transformer
- **Tools:** Numpy - torch

Detecting Offensive Vs Normal Text   **Project Repo**

Employed NLP techniques, including specific Arabic text preprocessing tools like ArabertPreprocessor, to prepare and clean a diverse Twitter dataset, and used Multinomial Naive Bayes with CountVectorizer to achieve highly accurate classification of Arabic Twitter text as offensive or normal..
- **Models:** Multinomial Naive Bayes - ArabertPreprocessor
- **Tools:** Pandas - SciKit-Learn -- NLTK - CountVectorizer

Potato Disease Leaf Classification   **Project Repo**

Project focuses on detecting potato leaf diseases (Early Blight, Late Blight) and distinguishing them from Healthy leaves using Deep Learning and Transfer Learning techniques. We use the Potato Leaf Disease (PLD) dataset, apply a powerful model based on EfficientNetB0 architecture.
- **Models:** CNN - EfficientNetB0
- **Tools:** Open-cv -Numpy - Tensorflow - SciKit-Learn

Computer Vision Repo with a Practical Projects   **Project Repo**

Analyze images and videos to extract meaningful information through techniques like image segmentation, object detection, OCR, facial recognition, pose estimation, object tracking, and image restoration.
- **Models:** CNN
- **Tools:** Open-cv -Numpy

EXTRACURRICULAR ACTIVITIES

Computatily Community, Egyptian Russian University, Egypt

Technical Team Leader   **Dec. 2023 – Jun. 2024**
- Led a team of 10 developers in organizing and maintaining technical workshops and coding bootcamps.
- Conducted weekly sessions on supervised and unsupervised learning techniques.

Technical Committee Member   **Oct. 2022 – May 2023**
- Participated in organizing technical events and internal hackathons.
- Contributed tutorials and documentation for new members on using Python, Git, and ML frameworks.

TECHNICAL SKILLS

Programming
- Python
- SQL
- Java
- C++

Libraries / Frameworks
- NumPy, Pandas
- SciKit-Learn
- Transformers
- Seaborn
- Plotly, Dash

- PyTorch
- PySpark
- TensorFlow Keras
- Flask
- Power Bi

Others
- Docker, Compose

- Web Scraping
- Data Wrangling

- Jupyter Notebooks
- Data Visualization

COURSES

- Machine Learning – Artificial Intelligence, (iTi)   **Certificate**
- AI Diploma Using C++ , (Orange Digital Center)   **Certificate**
- Introduction to Natural Language Processing, (Analytics Vidhya)   **Certificate**
- Big Data Fundamentals, (Orange Digital Center)   **Certificate**
- Huawei Python Course, (Huawei & Ministry of Youth and Sports)   **Certificate**

SOFT SKILLS

- Leadership
- Commitment
- Communication
- Presentation

LANGUAGES SKILLS

- English: Proficient
- Arabic: Native

PUBLICATIONS

- Advances in ASL Detection: **YOLOv8** approach [2024]   **Paper Link**

PERSONAL INFO

- Military Status: Exempted
- Ready to relocate.