Hassan Hamed Zoghly
Data Scientist

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Summary

AI Engineer and Data Scientist with expertise in Deep Learning, NLP, and Computer Vision, skilled in transforming complex datasets into actionable insights. Experienced across the full ML pipeline from exploratory data analysis and feature engineering to model training, evaluation, and deployment.

Education

Menoufia University — B.Sc. Artificial Intelligence & Data Science.   Oct 2022 – Jul 2026
GPA: 3.4

Experience

Digital Egypt Pioneers Initiative (DEPI) – Generative AI Trainee   Jul 2025 – Present

- Gained strong foundations in Artificial Intelligence and Data Science, including Machine Learning, Deep Learning, Neural Networks, and NLP.
- Performed data preprocessing, cleaning, and exploratory data analysis (EDA) to extract patterns and insights from raw datasets.
- Built and evaluated predictive models (classification, regression, clustering) using modern ML algorithms.
- Applied deep learning techniques (ANNs, CNNs) to real-world datasets for advanced problem-solving.
- Developed and presented practical projects showcasing data-driven decision-making and AI applications.
- Improved teamwork, collaboration, and data storytelling skills by communicating insights effectively

Skills

Technical Skills:
- **Programming & Data Handling**: Python, SQL, PostgreSQL, NumPy, Pandas, OOP.
- **Machine Learning**: Scikit-learn, Random Forest, XGBoost, SVM, Decision Trees, Logistic Regression, Feature Engineering, Feature Selection, Model Evaluation, Hyperparameter Tuning.
- **Deep Learning**: PyTorch, NLP (Transformers, NLTK), Computer Vision (OpenCV), Reinforcement Learning.
- **Deployment & Cloud:** Docker, FastAPI, MLOps.
- **Data Visualization & Storytelling**: Matplotlib, Seaborn, Power BI, Streamlit.

Soft Skills:
- Communication Skills, Adaptability, Collaboration & Teamwork, Time Management, Leadership, Creativity.

Projects

Online Market Sales Analysis   Aug 2025

- Performed end-to-end exploratory data analysis (EDA) on an online sales dataset, including cleaning, missing value handling, type conversion, and outlier detection.
- Delivered actionable recommendations by segmenting customers, analyzing regional/category performance, and visualizing seasonal sales trends.

Tools: Python, Pandas, NumPy, Matplotlib, Seaborn, Missingno, SciPy.

Sports Popularity Analysis with Web Scraping   May 2025

- Analyzed global interest in sports using scraped data from Google Trends and YouTube views.
- Automated data collection using requests, BeautifulSoup, and API access.

Tools: Python, BeautifulSoup, Pandas.

DQN Agent for 2048 Game (Reinforcement Learning)   May 2025

- Designed and implemented a Deep Q-Learning agent that consistently reached the 2048 tile in 85% of games.
- Trained on over 10,000 episodes, achieving average score 15,000+ points.

Tools: *PyTorch, NumPy.*

Auto-correct System using NLP & Edit Distance   May 2025

- Developed a spelling correction system that achieved 92% accuracy on benchmarks.
- Applied NLP preprocessing, tokenization, and edit distance algorithms.
- Handled 50,000+ vocabulary words and multi-word error corrections.

Tools: *NLTK, spaCy, Edit Distance, N-gram models, Transformers.*

Detecting Traffic signs for GTSRB   Dec 2023

- Collaborated with a team to optimize a CNN model, achieving 98.5% accuracy.
- Applied data preprocessing, normalization, and image augmentation to improve model generalization.
- Trained and evaluated the model using TensorFlow/Keras on 43 different classes.

Tools: *Python, TensorFlow, Keras, OpenCV.*