Asser Mahmoud

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Summary

Senior Communication and Information Engineering student with a strong foundation in Data Science, AI, and software engineering. Successfully implemented AI-based projects in both software and hardware. Passionate about knowledge sharing, with experience mentoring others in Machine and Deep learning.

Education

Helwan University, BS in Communication and Information Engineering   (Expected Grad: June 2026)

GPA: 3.1/4.0

Relevant Coursework: Calculus, Probability, AI, Machine Learning, Database, OOP, Computer vision

Key Projects

Lab Components Detector (TensorFlow, CNN)   Kaggle | HuggingFace
- Collected and labeled 500 images of electronic components.
- Fine-tuned MobileNetV2 achieving 97% validation accuracy.
- Developed a real-time detection Gradio app hosted on Hugging Face.

Confusion Detection via Mouse Movement (XGBoost)   GitHub
- Engineered features from mouse coordinate data on LMS platform.
- Compared 3 ML models and DL LSTM; XGBoost achieved 99% test accuracy.
- Built a real-time FastAPI ML prediction service controlling data flow from the platform to end users

Car Price Prediction (TensorFlow, ANN)   Kaggle
- Visualized and Transformed car price data (cleaning, outlier removal, scaling, encoding).
- Built a feedforward ANN from scratch achieving 0.11 MAE on test data.

AdventureWorks Sales Analysis (SQL, Power BI)   GitHub
- Queried data from AdventureWorks database using SQL based on business demand letter.
- Improved reporting system creating a 4-page interactive Power BI dashboard.

Extracurricular Activities

ML Technical Volunteer, IEEE-HSB (Oct 2024 – July 2025)
- Led 10 workshops on machine and deep learning.
- Taught over 150 participants Python basics, Numpy, Pandas, Matplotlib, and ML/DL basics.
- Served as judge and mentor in ML hackathons.

FEHU CPC Member, Helwan Student Club (March 2023 – June 2023)
- Attended 6 sessions on DSA topics like time complexity, sorting, and pointers.
- Solved A/B/C level problems on Codeforces. Codeforces: AasTheRipper

Competitions
- Modifier 8.0: Led team to 3rd place in ML Track — Vehicle Classification CNN (July 2024)

Courses

- **Supervised Machine Learning**, DeepLearning.ai (Coursera) — *Regression, classification, loss functions, evaluation metrics.*
- **Advanced Learning Algorithms**, DeepLearning.ai (Coursera) — *Neural networks, regularization, optimization methods.*
- **Data Analysis and Business Intelligence**, Techmind — *Excel, SQL, Power BI dashboard development.*
- **Intro to Statistics in Python**, DataCamp — *Descriptive stats, distributions, hypothesis testing.*
- **Intro to PyTorch**, DataCamp — *Neural network training using PyTorch.*

Skills

Languages: Python, C++, SQL

Libraries/Frameworks: TensorFlow, Pandas, NumPy, Matplotlib, Seaborn

Tools: Power BI, Excel, SQL server, git