SELVIA NASSER BEKHIT

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Education

Faculty of Computers and Data Science, Alexandria University — Alexandria, Egypt
B.Sc. in Data Science, CGPA: 3.73/4.0 — *2023 – 2027*

Professional Experience

Machine Learning Engineer Trainee — 06/2025 – 12/2025
Digital Egypt Pioneers Initiative – Microsoft Partnership

- Engineered supervised/unsupervised ML models using Python, scikit-learn, and pandas, achieving 85% accuracy on classification tasks with 10,000+ data points.
- Optimized data preprocessing pipelines, reducing model training time by 30% through feature engineering techniques.

IoT and Software Development Intern — 06/2025 – 09/2025
Alexandria University — *Alexandria, Egypt*

- Architected ESP32-based IoT systems with 10+ sensors for real-time data acquisition and processing.
- Developed Flutter/Dart mobile application, improving user interaction efficiency by 25% through intuitive UI/UX design.

Projects

Lumiverse – Smart IoT Ecosystem | *Python, Flutter, MQTT, Supabase, NLP* — 2025

- Developed full-stack IoT solution with Flutter app handling 1,000+ daily MQTT messages for real-time device control.
- Integrated AI sentiment analysis using NLP, improving mood detection accuracy by 15% for adaptive ambient lighting.

Twitter Sentiment Analysis | *Python, NLTK, scikit-learn, Flask, TF-IDF* — 2025

- Developed end-to-end NLP pipeline processing 20,000 tweets with regex cleaning, lemmatization, and TF-IDF vectorization.
- Achieved 78.1% accuracy using Logistic Regression, deployed REST API with Flask for real-time sentiment predictions.

Wine Quality Prediction System | *Python, NumPy, scikit-learn, Pandas* — 2025

- Designed SVM and neural network models for wine quality classification, processing 4,000+ samples with 11 features.
- Achieved 88% precision and 85% F1-score through hyperparameter tuning, outperforming baselines by 10%.

Real Estate Price Prediction | *Python, scikit-learn, Matplotlib, Seaborn* — 2024

- Built regression pipeline with feature selection, reducing RMSE by 20% on 5,000+ property records.
- Created 10+ interactive visualizations for exploratory data analysis and stakeholder presentations.

Technical Skills

Languages: Python, SQL, C++, Java, R, C
ML/DS Tools: scikit-learn, pandas, NumPy, Matplotlib, Seaborn, PyTorch, TensorFlow, Streamlit
Technologies: Git, Firebase, Supabase, Jupyter, Flutter, Dart, MQTT, REST APIs

Extracurricular Activities

IEEE AlexCSC Member — 2024 – Present

- Participated in 10+ technical workshops on competitive programming, algorithms, and emerging technologies.

Science Education Volunteer, Planetarium Science Center — 2024 – Present
Bibliotheca Alexandrina — *Alexandria, Egypt*

- Facilitated 5+ educational programs and interactive STEM workshops for 100+ youth.

Additional Information

Skills: Problem Solving, Team Collaboration, Adaptability | **Languages**: Arabic (Native), English (Proficient)