MOHAMMED AHMED EZZ-ELDIN

Computer Science Student | Machine Learning Developer | Data Scientist

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PROFESSIONAL SUMMARY

Computer Science and Artificial Intelligence student with strong expertise in machine learning, data science, and software development. Experienced in Python programming, SQL database management, and implementing machine learning algorithms from scratch. Proven track record in building predictive models, deep learning applications for healthcare solutions, and neural network implementations from first principles.

EDUCATION

Bachelor of Computer Science and Artificial Intelligence

Cairo University | Expected Graduation: 2026

Relevant Coursework: Machine Learning, Data Structures, Algorithms, Database Systems, Artificial Intelligence

TECHNICAL SKILLS

Programming Languages: Python, SQL, C++, C#

Data Science & ML: NumPy, Pandas, scikit-learn, TensorFlow, Keras, Statistical Analysis

Machine Learning: Supervised Learning, Linear/Logistic Regression, Decision Trees, SVM, KNN, Naive Bayes, Ensemble Methods

Deep Learning: CNN, Transfer Learning, ResNet, MobileNet, Computer Vision, Neural Network Architecture Design

PROJECTS

Deep Learning from Scratch Implementation

Technologies: Python, NumPy, Mathematical Optimization, Neural Network Architecture

GitHub: https://github.com/mo-ezz-eldin/deep_learning_from_scratch

• Implemented complete neural network framework from mathematical foundations without external ML libraries

• Built forward propagation, backpropagation, and gradient descent algorithms from scratch

• Developed multilayer perceptron with customizable architecture and activation functions

• Implemented various optimization techniques including momentum and adaptive learning rates

• Created modular design for easy extension to different network architectures

• Demonstrated deep understanding of neural network mathematics and computational graphs

Breast Cancer Prediction System (Web Application)

Technologies: Python, Flask, scikit-learn, Pandas, NumPy, HTML5, CSS3, JavaScript

GitHub: https://github.com/mo-ezz-eldin/Breast-Cancer-Prediction

• Developed comprehensive machine learning web application for breast cancer diagnosis prediction

• Implemented ensemble learning combining Logistic Regression and Naive Bayes algorithms

• Applied ANOVA feature selection to identify 15 most important diagnostic features

• Built interactive web interface with real-time prediction capabilities

• Integrated data preprocessing pipeline with feature scaling and outlier detection

• Achieved high accuracy through ensemble voting methodology and hyperparameter optimization

• Deployed complete end-to-end solution with user-friendly interface

CORE COMPETENCIES

Machine Learning Development:

○ Algorithm implementation from mathematical foundations
○ Supervised learning specialization in classification and regression
○ Ensemble methods including Random Forest and Gradient Boosting
○ Model evaluation and hyperparameter tuning
○ Neural network architecture design and optimization

Software Development:

○ Problem solving and algorithmic thinking
○ Object-oriented programming in Python, C++, and C#
○ Database design and SQL query optimization
○ Version control and collaborative development

Data Science:

○ Data analysis and visualization using Python libraries
○ Statistical modeling and hypothesis testing
○ Feature selection and dimensionality reduction
○ Data preprocessing and pipeline creation

ADDITIONAL SKILLS

Problem Solving, Algorithm Design, Statistical Analysis, Data Visualization, Software Engineering, Mathematical Modeling, Research & Development