Basel Ashraf Fikry

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Education

University of East London
Dual Degree Program with Ain Shams University
BSc in Computer Engineering and Software Systems
Expected Graduation: February 2026

- Pursuing a comprehensive curriculum covering advanced topics in computer engineering and software systems, including machine learning, algorithms, and system design.
- Participating in collaborative research projects with industry partners to develop cutting-edge technological solutions.

Cairo University
Engineering Preparatory Year
2021 – 2022

- Completed foundational coursework in mathematics, physics, and engineering principles, maintaining a 3.8 GPA.
- Led extracurricular activities focusing on leadership development and community service, increasing member engagement by 20%.

Experience

Machine Learning Intern   Prodigy Infotech
prodigyinfotech.dev
February 2024 – March 2024

- Spearheaded the development of calorie tracking and recipe suggestion features, enhancing user engagement by 40% through innovative machine learning algorithms.
- Engineered a scalable data preprocessing pipeline, reducing model training time by 20% and improving data accuracy.
- Integrated machine learning models into a cloud infrastructure, optimizing computational efficiency by 30% and enabling real-time data processing capabilities.
- Received a Letter of Recommendation for outstanding performance and contributions.

Machine Learning Intern   IEEE Egypt
March 2024 – April 2024

- Applied advanced machine learning techniques to optimize neural network hyperparameters, resulting in a 5% increase in model accuracy for sentiment analysis applications.
- Conducted research on natural language processing (NLP) models, enhancing model performance by 7% through innovative algorithmic improvements.
- Coordinated and delivered machine learning workshops, training over 100 professionals in industry-relevant skills and best practices.

Projects

Remote Health Monitoring System

- Created a system using Arduino UNO, ESP8266 ESP-01, and sensors (MAX30100 for heart rate and SpO2, LM35 for temperature, MPX5700AP for blood pressure).
- Utilized ThingSpeak API for wireless data transmission, enhancing real-time monitoring.
- Designed a user-friendly interface with Arduino IDE and LiquidCrystal library.
- Achieved a 35% reduction in medical alert response time and a 40% decrease in latency.

AI Model for Fruit and Vegetable Recognition

- Developed a state-of-the-art AI model using Google Colab, TensorFlow, Keras, and OpenCV, achieving 98.71% accuracy in identifying fruits and vegetables.
- Integrated the AI model with a mobile app interface, enhancing real-time user interaction by 35% and improving user health tracking capabilities.

Interactive Arduino Project: Gesture-Controlled Robotic Arm

- Designed and built a gesture-controlled robotic arm using Arduino, incorporating sensors and actuators for precise movement based on hand gestures, achieving a 95% accuracy rate.
- Implemented machine learning algorithms to recognize and interpret gestures, enabling intuitive control and interaction with the robotic arm, reducing task completion time by 30%.

Paper Piano

- Engineered an interactive music application using C++ and capacitive sensing technology, constructing a 46-key piano on a paper surface.
- Implemented accurate note detection and sound generation algorithms, providing users with a seamless and immersive musical experience, with over 500 downloads.

Web Automation with Selenium

- Automated web tasks using Python and Selenium, significantly reducing manual workload by implementing regular updates and notifications via Telegram, saving 10 hours per week.

Skills

Programming Languages:
- Python
- C++
- Java

Machine Learning:
- TensorFlow
- Keras
- OpenCV
- Data Preprocessing
- Model Optimization

- Neural Networks

Data Analysis:
- Pandas
- NumPy
- Matplotlib
- Data Visualization
- Statistical Analysis

Automation:
- Selenium
- Web Scraping

- Scripting

Robotics and Hardware:
- Arduino
- Sensors
- Actuators
- Gesture-Controlled Systems

Other Skills:
- Innovation and creativity
- Team Collaboration
- Project Management

Certifications

- Certificate of Visual Basic, Ministry of Defence, 2015
- Web Design Certificate, Up2U Academy, 2018
- Mobile App Development, Next Academy, 2023

- Strategic Thinking, Project Management Institution, 2023
- Microsoft Power Apps: Using the Dataverse, NASBA, 2023
- Remote Working Foundations, Project Management Institution, 2023
- Academic IELTS, Score: 7.0, 2023

Awards

- Achieved First Place in Web Designing Competition at the age of 14, 2015
- Multiple awards in science and technology since high school, including the National Science Fair, 2019