Ahmed Maher

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Education

Egypt Japan University Of Science & Technology   Oct. 2020 – Aug. 2025
Bachelor of Science in Engineering, Computer Science and Engineering Major   *Alexandria, Borg El Arab*

Relevant Coursework

- Data Structures
- Software Methodology
- Algorithms Analysis
- Database Management
- Machine Learning
- Advanced Programming
- Software Engineering
- Discrete Mathematics
- PBL on CSE
- Data Structures
- Data Engineering
- Deep Learning
- TOC
- Parallel and Distributed Computing
- Cryptography

Technical Skills

Languages: Python, C, HTML/CSS, JavaScript, SQL, PostgreSQL, Dart
Developer Tools: VS Code, Pycharm, Google Cloud Platform, Android Studio, CLI
Technologies/Frameworks: Linux, Git & GitHub, JUnit, WordPress, IOT, Arduino
Data Science: Machine Learning, Deep Learning, Reinforcement Learning, Data Analysis, Data Acquisition, Data Engineering, Data Visualization, Pandas, NumPy, Matplotlib, Scikit-learn, TensorFlow

Projects

AI-Driven Sports Video Summarization for Automated Highlights   April 2024
- Collaborated with a team on implementing a deep learning-based system for automatic sports video summarization using SoccerNet-V2 dataset.
- Utilized ResNet for feature extraction and a context-aware loss function for action spotting.
- Developed a script for generating highlight videos based on predicted actions.
- Achieved significant improvement in action detection accuracy and performance evaluation on SoccerNet-V2 dataset.

Neural network analysis | *Python, Selenium, NetworkX,*   November 2022
- Scraped tweets from a Twitter user's timeline using selenium and snscrape library.
- Constructed a network graph representing user mentions in tweets.
- Calculated key network centrality measures, including degree and betweenness centrality.
- Visualized centrality results and network graphs for insights.
- Exported data in CSV and JSON formats for further analysis.

Taxi Route Optimization with Reinforcement Learning | *Python, Gymnasium, DataCamp*   July 2024
- Developed a reinforcement learning agent using Q-learning to navigate a taxi in the Taxi-v3 environment provided by OpenAI's Gymnasium.
- Optimized taxi navigation for efficient passenger pickups and drop-offs using an epsilon-greedy policy to balance exploration and exploitation.
- Successfully trained the agent over 2000 episodes, refining route planning and decision-making.

Bus Seat Reservation App | *Flutter, Firebase, Android Studio, UI/UX*   March 2023
- Developed a mobile app using Flutter and Firebase for bus seat reservations at my university.
- Implemented user registration and login functionality for secure access to the reservation system.
- Handled user-friendly error messages and notifications to enhance the user experience.
- Visualized centrality results and network graphs for insights.
- Exported data in CSV and JSON formats for further analysis.

Transaction Management GUI | *Python*   October 2021
- Designed a sample banking transaction system using Python to simulate the common functions of using a bank account.
- Created a GUI that supports actions such as creating an account, deposit, withdraw, list all accounts, etc.
- Implemented object-oriented programming practices such as inheritance to create different account types and databases.

Certifications

- **Datacamp Intermediate SQL**

- **Datacamp Supervised and Unsupervised Machine Learning**

- **Datacamp Git**

- **ITI Flutter Application Development**

- **IBM Skillbuild AI/ML**

- **IBM Cloud Foundation**

- **FreeCodeCamp Relational Database**

- **Robotics & Automation**

Competitions and Volunteering

National Underwater Robotics Challenge (NURC)   2024
Arizona
- As a member of the VORTEX Robotics team, contributed to winning 1st place in the college category.

Intel BASEF Science Fair   2018

- Developed "Maritopia," a marine automated safety and control system using Arduino, FPV system, US Radar, Kinect IR, Hand Gestures control system, shields for remote controlling and data visualization, and IoT.

Regional ISEF   2020

VCSEF (Victoria College Science and Engineering Fair)   2018,2019
First place grand award recipient

RoboCup Competition   2018

Faculty of Alexandria 8th students conference for research and innovation   2019

British Council Taqaddam competition   2018

Victory College Loyal Victorians   2019