Abdallah Afifi

+201095105091 | abdallahfathi@aucegypt | linkedin.com/in/abdallah-afifi26 | github.com/Abdallah-Afifi

Education

The American University in Cairo Sept. 2022 – June 2026
Bachelor of Computer Science *USAID-AUC Merit Award*

Coursework

AUC: Fundamentals of Computing I, Fundamentals of Computing II, Applied Data Structures, Discrete Mathematics, Linear Algebra; Harvard: CS50 Introduction to Computer Science; MIT: Introduction to Computer Science and Programming Using Python, Mathematics for Computer Science, Introduction To Algorithms; UMich: Python for Everybody, Problem-Solving using Computational Thinking; UCSD: Mathematical Thinking in Computer Science

Experience

Software Developer Sept. 2022 – Present
The American University in Cairo *Student Union*
- Developed the American University in Cairo's Student Union mobile application for both Android and iOS platforms, in addition to creating a website and establishing a back-end database infrastructure.
- Led the development team responsible for the carpooling feature, promoting sustainability initiatives within the student body.

IT/Website Manager Sept. 2020 – Present
The American University in Cairo *Robotics Club*
- Managed and maintained the club's website, ensuring it remained constantly updated with the latest essential updates.
- Coordinated robotics events in collaboration with renowned industry representatives from Google, Microsoft, and Valeo, fostering valuable partnerships and enriching club activities.

Software Developer Sep. 2019 – Sept. 2022
Be Apps *Cairo, EG*
- Led and managed a team of developers and UI/UX designers, overseeing the development of more than 30 mobile applications.
- Collaborated with key clients Vezeeta and HungerStation to develop and enhance their mobile applications, serving over 10 million users.

Projects

Experimental-Verification-and-Analysis-of-Sorting-Algorithms | ***C++, QT, Python, UML, Git, OpenXLSX***
- Implemented Selection, Insertion, Merge, Quick (with its variations), Bubble, Counting, Heap, Tree, and shell sorting algorithms using Random Permutation Vectors with a standard entropy and maximum size of 24000.
- Analyzed the algorithms based on the number of comparisons, swaps, and time complexity, verifying their mathematical model.

Complexity Analyzer | ***C++, Regex, Git, UML***
- Developed a program to analyze and calculate the time complexity of code written in any programming language.
- Used Graph-based Functional Analysis (GFA) to build the analysis algorithm.

Password Manager | ***C++, UML, Git, OpenSSL***
- Developed a password manager application implementing AES encryption, SHA hashing, compression, and password-generating algorithms.
- Implemented password generation, auto-fill, password customization, data compression, two-factor authentication, bio-metrics authentication, and secure sharing features.

Plagiarism Detection Utility | ***C++, UML, Git***
- Implemented Hamming Distance, Approximate String Matching, Rabin Karp, Knuth Morris Pratt, Boyer Moore, N-Gram Analysis, Cosine Similarity, Levenshtein Distance, and an enhanced Brute Force Algorithm to detect plagiarism in input documents.
- Analyzed and compared the algorithms in terms of time complexity.

Skills & Awards

Technical: C, C++, Python, Java, Kotlin, Dart, Flutter, React Native, JavaScript, HTML, CSS, PHP, WordPress, UML, Git, QT, APIs, Arduino, Firebase, Node.js, Socket.io, Linux, UI/UX
Awards: Line Follower Cup, 1st Place | NASA Space Apps, 2nd Place | Intel ISEF Cairo, 1st Place