Ayman Abdalla

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Education

University of Texas at Arlington — Arlington, TX
Bachelor of Science in Software Engineering — *Expected Graduation: December 2024*

Texas A&University at Corpus Christi — Corpus Christi, TX
Bachelor of Business in Marketing — *August 2014 – December 2018*

Skills

Languages: C/C++, C#, Java, Python, JavaScript, TypeScript, SQL, HTML/CSS

Technologies: Git, Flask, JUnit, Node.js, React.js, MySQL, MongoDB, Docker, Azure, AWS, Kubernetes, PyTorch, Jira

Methodologies: Agile, Scrum, OOP, Functional Programming, WaterFall

Experience

University of Texas at Arlington, Department of Computer Science — Arlington, TX
Undergraduate Teaching Assistant – Theoretical Computation — *August 2023 – December 2023*

- Provided one-on-one support to over 50 students during weekly office hours, addressing questions or concerns, and clarifying any doubts related to course content.
- Graded assignments and exams promptly, maintaining a 48-hour turnaround time, and provided constructive feedback.
- Updated course materials, including lecture notes, problem sets, and exam questions, contributing to an increase in student comprehension and engagement.

Projects

PixEra | *Python* | *JavaScript* | *MongoDB* | *React.js* | *Flask*

- Contributed to the development and enhancement of PixEera, our project involved creating an application to allow photographers to better connect with clients providing them an easy booking and reserving experience.
- Conducted extensive testing **running 1000+ test cases** to validate the new functionality ensuring the stability and reliability of our code.
- Utilized GitHub's issue tracking system to actively **manage and resolve 30+ issues**. This streamlined communication within the team, ensuring that tasks were completed effectively.
- Actively **participated in 15+ code reviews**, providing valuable feedback and suggestions to my team members which improved code quality, identified bugs, and ensured compliance to best practices.

Red-Blue Nim Game | *Python* | *Bash* | *Git*

- Created a tactical decision-making game that allowed players to select blue and red marbles while avoiding depleting either pile to 0 marbles on their turn.
- Developed a computer agent utilizing the Minimax algorithm to analyze possible moves and select the optimal strategy against human players, achieving an **average success rate of 90**% in defeating human opponents.
- Integrated user-friendly interfaces and graphical elements, resulting in an interface with a **usability score of 4.5/5** as per user feedback.

Star Catalog Multithreading | *C* | *Bash* | *Git*

- Designed a multithreaded program to calculate the angular distance of **30,000 stars that utilized parallel computing** to distribute the computational workload increasing the program's efficiency and **reduce the overall execution time by 22**% .
- Carefully analyzed the workload and dynamically allocated tasks to ensure efficient utilization of computational resources and minimize idle time.

Mav Shell | *C* | *Bash* | *Git*

- Implemented a project focused on creating a Linux shell and added new functionalities within the shell, including command parsing, execution, and error handling capable of handling a wide range of user commands and scenarios
- **Incorporated over 100+ features** such as command history, history execution, and customizable prompts that enhanced the user experience, making the shell more intuitive and user-friendly.