Megan Morgan

Lockheed Martin, Software Engineering Intern, Summer 2024

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Education

Bachelors of Science, Computer Science, *University of Central Florida* GPA: 3.65, December 2024
Member of KnightHacks (May 2023 - Present)
Relevant Coursework:

- Data Structures and Algorithms, Object-Oriented Programming, Introduction to Full Stack Development, Web Development, Systems Software

Projects

CodeKids: Full-Stack Educational Website, *MongoDB, Express, React, Node*

- Developed interactive coding lessons and hands-on exercises to engage young learners and facilitate the comprehension of programming concepts.
- Implemented robust and secure user authentication and authorization mechanisms within the CodeKids platform to safeguard user data and ensure the utmost privacy for our young users.
- Designed and optimized the website's performance and functionality by facilitating seamless communication between the front-end and back-end systems.

Contact Manager, *Linux, Apache, MySQL, PHP*

- Enabled CRUD operations to allow users to create, view, edit, and delete their contacts seamlessly.
- Developed RESTful APIs to establish fluid communication between the front-end and back-end components, enabling real-time data synchronization and user interactions.
- Enhanced overall usability and user experience by crafting an intuitive, responsive front-end interface using HTML, CSS, and JavaScript, with a focus on accessibility.
- Integrated advanced search and filtering capabilities, enhancing users' ability to quickly locate specific contacts within their databases and improving overall efficiency.

Algorithm Visualizer, *HTML, CSS, SCSS, JavaScript*

- Created visualizations for 5 sorting algorithms, providing users with a comprehensive learning experience.
- Designed a user-friendly interface that allows customization of input data size and visualization speed, enhancing user control and learning flexibility.
- Included informative details about each sorting algorithm, such as time and space complexity, to enhance user understanding of algorithmic efficiency.
- Demonstrated strong problem-solving skills by translating complex algorithms into visually intuitive representations.

Servizio: Restaurant Management Game, *Unity, C#, PlasticSCM*

- Led a collaborative team effort to conceptualize and design a restaurant simulation game that challenges players to build and manage their dream restaurants.
- Designed and implemented AI-driven NPC customers and servers, integrating the A* pathfinding algorithm for efficient navigation and collision detection for realistic interactions.
- Created beautiful and user-friendly user interfaces for various in-game menus, enhancing the player experience and ensuring intuitive navigation.
- Successfully coordinated with team members to ensure seamless integration of gameplay mechanics, graphics, and AI components.

Skills

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

Software Tools/Operating Systems:
Git/GitHub, Visual Studio, Eclipse, Jira, Trello, macOS, Windows, Linux