**DECLAN MCKOEN**

(813) 503-8615 | mckoendeclan@gmail.com | github.com/declanmckoen | www.linkedin.com/in/declanmckoen

Education

**University of Florida** **GPA: 4.00**

*Bachelor of Science in Computer Science Expected May 2026*

**Relevant Coursework:** Data Structures and Algorithms, Comp. Linear Algebra, Discrete Structures, Calculus, Programming Fundamentals 1 & 2

**Technical Skills:** C++, C, Python, HTML, CSS, JavaScript, MATLAB, SFML, PyGame

**General Skills:** Microsoft Office Suite, G Suite

**King High School**

*IB Diploma**Received May 2022*

Work Experience

**Insightful Analysis Solutions** *Jan. 2024 – Apr. 2024*

*Research Assistant*

* Assisted with comprehensive literature reviews and data analysis to support grant proposals, ensuring alignment with funder priorities and maximizing the potential for successful funding outcomes.
* Played a key role in enhancing Insightful Analysis Solutions by providing support in company organization and contributing to the development and implementation of impactful marketing strategies, resulting in streamlined operations and increased client engagement.

Extracurriculars

**Littlewood Elementary School** *Aug. 2022 – Dec. 2022*

*Volunteer*

* Assisted the teacher in implementing engaging math activities tailored to 2nd grade level, fostering interactive learning environments.
* Provided one-on-one support to students, reinforcing foundational math concepts and boosting their confidence in tackling mathematical challenges.

Projects

**Minesweeper Clone –** *C++, SFML Library, Git Nov. 2023 – Dec. 2023*

* Developed a fully functional classic game of Minesweeper in C++ with SFML to output graphics and receive input.
* Structured code base and debugging processes with object-oriented programming to represent game objects, recursive methods, and front-end input to adjust the visibility of graphical elements such as mines, flags, and a flag counter.
* Parsed data from text files to implement pre-determined game board layouts.

**AVL Tree –** *C++ Feb. 2024*

* Developed an AVL tree data structure implementation, ensuring efficient insertion, deletion, and retrieval operations for managing data.
* Integrated comprehensive unit tests using industry-standard frameworks to validate the correctness and performance of AVL tree operations, ensuring robust functionality.

**Board Buddy –** *C++, Git Apr. 2024*

* Collaborated with a group of colleagues to conceptualize and develop Board Buddy, a C++ project facilitating the input of chess games via algebraic notation, leveraging a downloaded chess game database from Lichess.
* Applied regex techniques to parse and extract relevant data from the database, ensuring an accurate representation of the user-inputted game using an algorithm designed to calculate similarity scores.
* Utilized Merge Sort and Quick Sort algorithms collaboratively to efficiently organize games based on similarity scores, enhancing user experience by delivering personalized game recommendations to augment their learning.