

# Ryan McPherson

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## Education

### Bachelor of Science in Computer Science

August 2020 - Present

University of Florida, Gainesville, FL  
GPA 3.81/4.0

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## Relevant Coursework

- COT3100 Applications of Discrete Structures *Spring 2021*
- COP3530 Data Structures and Algorithms *In progress*
- MAS3114 Computational Linear Algebra *In progress*

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## Notable Projects

### Optimized AVL Tree Storage

October 2021

- **Tools:** C++, Catch2 | **Repository:** avl-tree
- Implemented a self-balancing AVL Tree to store users' names and id numbers in a way to optimize the lookup time for a particular user's id in a tree data structure
- Wrote 11 unit tests with the Catch2 framework to ensure each tree method functions as intended

### Assignment Notion Database

September 2021

- **Tools:** JavaScript, Node.JS | **Repository:** assignments-but-automated
- Constructed a script to automatically retrieve 100+ assignments from Canvas LMS and post them to a Notion database for convenience and quick referencing
- Executed GET and POST HTTP requests through REST APIs using public SDKs

### Portfolio Website

July 2021

- **Tools:** HTML5, CSS3, JavaScript | **Repository:** ryan-mcpherson-portfolio
- Developed and designed a portfolio website to display my projects, resume, and contact information
- Implemented features including responsive design, form submission, and animations

### Minesweeper

December 2020

- **Tools:** C++, SFML | **Repository:** minesweeper-clone
- Recreated popular retro game Minesweeper with user-friendly GUI using object-oriented programming
- Implemented features including displaying score, win/loss conditions, and developer assistant buttons

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## Involvement

### Software Engineering Club (SEC), Tech Lead

September 2021 - Present

University of Florida, Gainesville, FL

- Developed in a team of over 15 developers on Clubfinity, a mobile app build using the MERN stack
- Collaborated in a group of 4 developers on the data scrapping feature to populate the app automatically

### STEM Summer Institute, Mentor

May 2018 - June 2018

Western High School, Davie, FL

- Mentored over 30 young aspiring STEM students in basic engineering concepts

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## Skills

- **Programming Languages:** C++, JavaScript, HTML5, CSS3, Java, MATLAB
- **Frameworks:** React, Express, Catch2
- **Software:** Git, Node.JS, Postman, Affinity Designer