

# Patrick May

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## Education

**The College of Wooster**, Wooster, OH

August 2020 - present

Bachelor of Arts in Computer Science, Minor in Mathematics, Music

**GPA: 4.0/4.0**

**Awards:** Edward Taylor Prize, College Scholar Award, Music Performance Award, Dean's List

## Projects

### MyMyShopping Mobile App

[project repo](#)

- Created a cross-platform mobile application using **Flutter** and **Dart** to assist in navigating big-box stores with a simple user interface, which we improved use and accessibility by ~60% through using focus groups
- Queried store **RESTful APIs** to get store inventories, so that a shopping route based on a user's shopping list using could be made.
- Constructed a **NoSql** database, **Hive**, to perform CRUD on user data much faster than other (No)SQL databases.

### Dijkstra's Algorithm Visualizer

[project repo](#)

- Engineered a graph traversal algorithm visualizer using **Python** and **NetworkX** to display the process of Dijkstra's algorithm on any graph
- Animated the traversal through the graph using **Matplotlib** to help peers understand routing algorithms

### CRUD Lifter

[project repo](#)

- Created a full-stack web application to journal fitness data using **Flask**, for individual use
- Built a mySQL database normalized towards 3NF using **SQL** to store arbitrary amounts of user data.
- Wrote an API to interface to the database, and created many unit tests using **Python** to verify performance throughout development cycle

## Work Experience (by Relevance)

**Software Engineering Researcher**, Carnegie Mellon University

Summer 2022

- Conducted novel research in the area of secure programming in computer science education
- Created a user study, gathered research subjects, and extracted knowledge from qualitative data
- Presented findings to world class professors, coworkers, and guests

**Zone Intern (Lead Teaching Assistant)**, College of Wooster

January 2023 - ongoing

- Assist students in solving problems and understanding various concepts within discrete math
- Lecture about select computer science topics and create handouts to aid in students learning throughout lessons
- Received professional development in areas of education, group management, and networking

**Executive Vice President**, Jenny Investment Club

April 2022 - April 2023

- Research and manage the student-run club's investment portfolio of ~\$10 Million in assets, to outperform the Russell 2000 (\$ RUT) by 16% avg, annually
- Monitor portfolio risk and manage portfolio to keep risks within desired volatility parameters
- Manage officers and club activities to increase participation, engagement, and diversity

**Virtual Reality Lab Operator**, College of Wooster

Oct. 2021 - ongoing

- Design and remodel lab to be a space for students to experience and research virtual reality
- Compile documentation of introductory virtual reality materials to help other students get started

**New Student Mentor (ARCHer)**, College of Wooster

Summer 2021

- Liaised between college peers, faculty, and staff through means such as email, Microsoft Teams, and Zoom
- Advised incoming first-year students on what courses would fit their personal and academic interests

## Skills

**Programming** (Experienced -> Junior)

C++   Python   C   Haskell   Dart   SQL   Java   BaSH   Rust   Zig   Go   JS (node, next, react)

**Tools:**

Git   GNU Linux   Make   CMD   polars   numpy   Docker   Wireshark   Flask   WSL   Flutter   Microsoft/Google Suites

# Activities

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- Crohn's and Colitis Foundation**, West-Virginia/Pennsylvania Chapter2011 - Ongoing
- Advocate members of congress for the support and passing of policies that support people with Crohn's and Ulcerative Colitis.
  - Raise \$50,000+ in funds for the foundation that support patients and research directly.
  - Speak as a keynote speaker and/or honored hero for various foundation events: Team Challenge 2011 & 2014, Take Steps 2019, Women of Distinction 2013 & 2015.

- Comparative Politics Teaching Assistant**, College of WoosterSpring 2022
- Engaged with students through discussion about course materials on political theory such as institutions, colonialism, and democracy with a modern comparative political lens.
  - Managed classroom logistics, i.e. participation, attendance, grading quizzes, updating the class website, etc.

# Awards

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- 2023Goldwater Scholarship Nominee
- 2022Ohio Wesleyan Programming Competition, First Place
- 2018Canada Talks Pharma Highest Rated Presentation (Keynote Speech)
- 2013Association of Fundraising Professionals Youth Philanthropy Award