

# JUSTIN SHIM

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Rockville, MD 20850

## EDUCATION

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### University of Maryland, College Park

Dec 2024

Bachelor of Science, Computer Science & General Biology

GPA: 3.5

## PROJECTS

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### Maze Solver in Java

- Developed a maze solver program implementing three standard graph algorithms for pathfinding in mazes
- Demonstrated proficiency in Java optimization techniques, including the use of Hash Tables/Sets, Stacks, Queues, Interfaces, and Polymorphism to enhance program performance and maintainability
- Extended the functionality of the maze solver program by incorporating an interactive maze editor, allowing users to create custom mazes and test the pathfinding algorithms in real time

### Supermarket App

- Developed a responsive web application with interactive features using Node.js and Express.js, demonstrating proficiency in full-stack development
- Implemented data validation and display features using JavaScript and front-end templates with server-side logic using EJS for dynamic content rendering

### Weather App

- Developed a responsive web application using HTML, CSS, and JavaScript to display current weather information for any city
- Utilized the OpenWeatherMap API to fetch and display real-time weather data, including temperature, humidity, and weather conditions

## WORK EXPERIENCE

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### Chess Wizards

02/13/2023 – Present

Teacher

Bethesda, MD

- Enhanced students' strategic thinking and problem-solving skills through engaging and interactive lessons
- Developed and implemented a personalized curriculum tailored to students of diverse skill levels, effectively communicating complex concepts in a clear and accessible manner

### National Institute of Health

06/23/2023 – 08/02/2023

Bioinformatics Intern

Bethesda, MD

- Developed an automated pipeline in Bash for downstream analysis of sequencing data, improving the efficiency and reliability of sequencing analysis for future research efforts
- Implemented a Python script to ensure data quality by applying filtering criteria, and an R script to convert Ensemble gene IDs to gene symbols, improving the pipeline's functionality
- Presented research and development process to researchers at the NIH on a scientific [poster](#)

### Campus Organization

08/30/2021 – 05/17/2023

President

College Park, MD

- Led and managed an organization of over a hundred college students with a core team of five
- Planned and organized fundraising events, overseeing attendance, and effectively communicated event details through weekly emails, ensuring clarity and engagement

## SKILLS

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### Coding Languages

- Python, V-Python, C, C++, Java, JavaScript, HTML, CSS, SQL, MATLAB, Rust, R, AVR Assembly, Bash, Node.js, Express.js, MongoDB

### Environments and Practices

- Visual Studio, Jupyter Notebook, Eclipse, R-Studio, GitHub

### Other Relevant Skills

- Excel, Google Drive, Video Editing
- Biographies, Club Football, Basketball, Fishing, Aqua-scaping, Philosophy, Reading