

# MAXWELL GOLDBERG

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## EDUCATION

### Rutgers Honors College

*Pursuing Physics and Math double major, Computer Science minor - CGPA - 3.38*

09 2021 – Present

*New Brunswick, NJ*

## COURSEWORK / SKILLS

- Honors Physics III
- Honors Calculus III/IV
- Fullstack Web Development
- Data Structures & Algorithms
- Quantum Computing [↗](#)
- Artificial Intelligence

## PROJECTS

### Discordle Bot [↗](#)

03 2022

- Collaborated on a Discord bot that runs the popular game Wordle. Focused on creating and implementing the Wordle algorithm and having bot handle when the game ends.

### QBasic JavaScript Transpiler [↗](#)

08 2022

- Python script to transpile file written in QBasic 64 into JavaScript able to run in the browser. Has support for graphics through file of JavaScript helper functions.

### Matrix Multiplication Visualization [↗](#)

04 2021

- Interactive program to visually demonstrate effect of matrix multiplication on vectors in Cartesian plane. Useful as an aid in teaching students intuition behind matrix multiplication.

### Tetrahedral Molecule Simulation [↗](#) |

04 2021

- Simulation of classical molecule that correctly predicts bond angle and tetrahedral molecular geometry. Manually implemented 3d graphics. Can be extended to different numbers of electrons.

## EXPERIENCE

### Data Structures Assignment Developer

06 2022 – Present

- Created new assignments in Java for Data Structures course at Rutgers University. Worked in teams and utilized Git and GitHub for version control. Wrote documentation and test cases for code. Developed assignment about Conway's Game of Life to teach 2D Arrays and Union Find.

## TECHNICAL SKILLS

**Languages:** Python, Java, QB64, LaTeX, MatLab, JavaScript, HTML, CSS, C, Julia

**Programs:** VS Code, Eclipse, Adobe Photoshop, Adobe Illustrator, Sony Vegas Pro

**Technologies/Frameworks:** Linux, Git, Django, GitHub, MySQL, NodeJS, Bootstrap, ReactJS, pygame

## EXTRACURRICULAR

### Directed Reading Program [↗](#)

02 2022 – 05 2022

- Program run by Rutgers Math Department in which undergrads are paired with grad students to learn an advanced mathematical topic. Studied differential topology and culminated in final presentation at the end of the semester.

### HC Ally Mentor [↗](#)

08 2022 – Present

- Program through Rutgers Honors College that pairs upperclassmen with incoming freshmen within the Honors College. Upperclassmen then meet with, mentor, and help freshmen through their first year.

## ACHIEVEMENTS

- HS Valedictorian - Rank 1/699
- Won Third Place at UHACCS 2022
- Publication in NCBI [↗](#)
- Dean's List Spring 22