

EDUCATION

Meadville, PA	Allegheny College	Aug 2019 – May 2023
<ul style="list-style-type: none">• Major: Mathematics, B.S. (GPA: 3.55)• Minors Economics, Biology• Undergraduate Coursework: Linear Algebra, Foundations of Mathematics, Vector Calculus and Variables, Probability/Statistic Inferences I, Probability/Statistic Inferences II, Optimization and Approximation, Algebraic Structures I, Introduction to Real Analysis, Complex Variables		

INTERNSHIPS

Math Researcher, Intern	Allegheny College	May 2022 – Jul 2022
<ul style="list-style-type: none">• Studied mathematics under the supervision of Professor Caryn Werner.• Explored systems of algebraic curves in the projective plane, a topic in algebraic geometry.• Solved equations and visualized graphs using Wolfram Mathematica and the Wolfram Language.• Participated in the ACROSS seminar series, presenting my work to students and faculty at Allegheny College.		
Biology Researcher, Intern	Allegheny College	Jun 2021 – Aug 2021
<ul style="list-style-type: none">• Studied fruit flies under the supervision of Professor Bradley Hersh.• Attached green fluorescent proteins to several candidate DNA regions from fruit flies to identify biological switches by which a gene is turned on or off.		

SOFTWARE PROJECTS

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- Personal Website: www.bcardona.com (for additional information and projects)
 - **Pathfinding Visualizer** (www.bcardona.com/pathfinding-visualizer/).
 - Built VanillaJS application for visualizing various search algorithms.
 - Implemented Depth-First Search, Breadth-First Search, A* Search, Greedy Best-First Search, and Dijkstra's algorithm.
 - Utilized: JavaScript, HTML, CSS, Git, GitHub
 - **Sorting Visualizer** (www.bcardona.com/sorting-visualizer/).
 - Built VanillaJS application for visualizing various sorting algorithms.
 - Implemented Bubble Sort, Heap Sort, Insertion Sort, Quick Sort, and Selection Sort.
 - Utilized: JavaScript, HTML, CSS, Git, GitHub
 - **Sudoku Player** (www.bcardona.com/sudoku-solver/).
 - Built VanillaJS application for playing Sudoku.
 - Implemented four board difficulties: easy, medium, hard, and impossible.
 - Utilized: JavaScript, HTML, CSS, Git, GitHub
 - **Portfolio website** (www.bcardona.com/personal-website-js/).
 - Built ReactJS website to showcase my current GitHub projects.
 - Used GitHub's REST API to show automatically when update has been made to GitHub repository.
 - Utilized: ReactJS, Git, GitHub

CERTIFICATES

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- *AlgoExpert Certificate of Completion*, in recognition of completing 100 data structure and algorithms questions on AlgoExpert.io.

TECHNICAL SKILLS

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- **Proficient:** Python, JavaScript (ES6), Git, Github, Unix, Wolfram Mathematica, Wolfram Language, LaTeX, HTML5, CSS3, Visual Studio
 - **Familiar:** SQL, React, C++