

EDUCATION

Meadville, PA	Allegheny College	Aug 2019 – May 2023
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- **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
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- 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.

Genetics Researcher, Intern	Allegheny College	Jun 2021 – Aug 2021
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- 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** (<https://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.

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++