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# Bradley M. Cardona

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





## EDUCATION

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- **Allegheny College** Meadville, PA  
*Mathematics, B.S. (GPA: 3.55)* Aug 2019 - May 2023
  - **Selected 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

## CERTIFICATES

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- **Data Analytics:** Ask Questions to Make Data-Driven Decisions , Foundations: Data, Data Everywhere , Prepare Data for Exploration , Process Data from Dirty to Clean , Analyze Data to Answer Questions , Share Data Through the Art of Visualization 
- **Machine Learning:** Supervised Machine Learning: Regression and Classification , Advanced Learning Algorithms 





## INTERNSHIPS

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- **Allegheny College Mathematics Department** Meadville, PA  
*Undergraduate Researcher* May 2022 - Jul 2022
  - 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.
  - Presented my work to students and faculty of Allegheny College, as part of the ACRoSS seminar series.
- **Allegheny College Biology Department** Meadville, PA  
*Undergraduate Researcher* Jun 2021 - Aug 2021
  - 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 **:
  - 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 **:
  - 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 **:
  - Built VanillaJS application for playing Sudoku.
  - Implemented four board difficulties: easy, medium, hard, and impossible.
  - Utilized: JavaScript, HTML, CSS, Git, GitHub
- **Portfolio Template **:
  - Built template using React to showcase recently updated GitHub projects.
  - Used Github's REST API to show automatically when update has been made to GitHub repository.
  - Utilized: ReactJS, Git, GitHub

## TECHNICAL SKILLS

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- **Proficient:** Python, SQL, JavaScript (ES6), Microsoft Excel, Google Sheets, Git, GitHub, Mathematica, Wolfram Language, LaTeX, HTML5, CSS3
- **Familiar:** Tableau, React, C++

## SOFT SKILLS

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- **Strong:** Communication, Collaboration, Attention to detail, Perseverance, Adaptability