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Bradley M. Cardona

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EDUCATION

- **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

- **Data Analytics**: Ask Questions to Make Data-Driven Decisions ⬈, Foundations: Data, Data Everywhere ⬈, Prepare Data for Exploration ⬈, Process Data from Dirty to Clean ⬈
- **Machine Learning**: Supervised Machine Learning: Regression and Classification ⬈

INTERNSHIPS

- **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

- **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

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

SOFT SKILLS

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