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# Bradley M. Cardona

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[www.bcardona.com](http://www.bcardona.com)

## EDUCATION

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- **Allegheny College** Meadville, PA  
*B.S. Mathematics (GPA: 3.55)* *Aug 2019 - May 2023*
  - **Honors:** Cum Laude
  - **Selected Coursework:** Linear Algebra, Introduction to Real Analysis, Vector Calculus and Variables, Probability/Statistic Inferences I, Probability/Statistic Inferences II, Optimization and Approximation, Complex Variables

## CERTIFICATES

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- **Google Data Analytics Professional Certificate:** Developed an advanced understanding and proficiency of platforms for effective data analyses, including spreadsheets, SQL, R, and Tableau.
- **Machine Learning Specialization:** Learned about modern machine learning concepts, including supervised learning (linear regression, logistic regression, neural networks, decision trees), unsupervised learning (clustering, anomaly detection), recommender systems, and reinforcement learning.

## 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.

## SOFTWARE PROJECTS

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- **Personal website:** [www.bcardona.com](http://www.bcardona.com) (for additional information and projects)
- **Fertility Rates Case Study** ([Tableau](#), [GitHub](#)):
  - Conducted a study to explore the trends of average total fertility rates across large geographical regions from 1960 to 2021.
  - Concluded that a significant decline in average total fertility rates has been observed in nearly every country.
  - Utilized: R, Tableau, Excel, Git, GitHub
- **Deep Work Tracker** ([GitHub](#)):
  - Developed a Python project to track and record focused work activities, known as “deep work”, to improve my productivity.
  - Implemented a CSV file-based system for logging daily accomplishments and a Python script for generating visualizations and a daily/monthly summary.
  - Utilized: Python, Pandas, Matplotlib, Seaborn, Git, GitHub
- **Pathfinding Visualizer** ([Website](#), [GitHub](#)):
  - Developed an immersive JavaScript web application to visualize 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** ([Website](#), [GitHub](#)):
  - Built an interactive JavaScript web application to visualize a range of sorting algorithms.
  - Implemented Bubble Sort, Heap Sort, Insertion Sort, Quick Sort, and Selection Sort.
  - Utilized: JavaScript, HTML, CSS, Git, GitHub

## TECHNICAL SKILLS

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

## SOFT SKILLS

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