Dominic Musumeci

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EDUCATION

University of Rochester (UR) - B.S. Computer Science, B.S. Mathematics

Fall 2022 - Spring 2026

GPA: 4.0/4.0

- Relevant Coursework : Data Structures and Algorithms, Computation and Formal Systems, Calculus I-IV, Linear Algebra, Discrete Mathematics, Probability, Logic, Mechanics.
- Anticipated 2023-2024: Artificial Intelligence, Number Theory, Algorithms, Game Theory, Machine Learning, Graph Theory, Data Mining, Computer Organization, Data Analysis II.

SKILLS

- **Languages:** Python, Java, C, SQL, Lisp, JavaScript, HTML/CSS, Bash
- **Libraries:** Numpy, Pandas, Matplotlib, Scipy, TensorFlow, Tesseract, BeautifulSoup
- **Tools:** Git, Docker, Linux

WORK EXPERIENCE

UR Undergraduate Data Science Researcher May 2023 - August 2023

- Researched reinforcement learning and classical approaches to solve systems of nonlinear equations.
- Created a reinforcement learning algorithm to detect and analyze patterns in ChatGPT responses.
- Studied geometry, probability theory, combinatorial geometry, and python ML libraries.

UR CSUG Tutor January 2023 - May 2023

- Organized open sessions, scheduled meetings, and responded to questions submitted online.
- Assisted a community of 250+ students with programming projects and math problem sets.
- Tutored Discrete Math, Linear Algebra, Calculus, Probability, Intro to CS, and DSA.

PROJECTS

College Basketball Statistics

- Designed a ranking algorithm for NCAA basketball teams based on 20+ statistics from 2014-2022.
- Employed paired t-test samples to evaluate a teams ranking and determine statistical significance.
- Built using Java.

Car Price Prediction Model

- Designed a multivariate linear regression model to predict car prices based on various attributes.
- Cleaned and Analyzed a large dataset of 500,000+ cars to parameterize a model on 15 base features.
- Built using Python (Numpy, Pandas)

Economic Data Modeling

- Created scatter plots and tables to visualize data representing wealth disparities in CNY.
- Analyzed data to determine statistical significance of research.
- Built using Python (Matplotlib, Numpy, and Pandas).