JACK HYATT

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EDUCATION

University of South Carolina Honors College Spring 2025

B.S. in Computer Science, B.S. in Mathematics Overall GPA : 3.855

ACADEMIC ACHIEVEMENTS

- SC Honors College 2025
- President's List Fall 2021,22,23
- Dean's List 2021-2024
- Math Department Award 2023-2024

EXPERIENCE

Data Science REU, University of South Carolina, *Columbia, SC* June 2024 - July 2024

- Used Autoencoders to explore and probe properties of graphs.
- Incorporated Reinforcement Learning to challenge lower bounds in extremal graph theory problems.

Data Science REU, University of South Carolina, *Columbia, SC* June 2023 - July 2023

- Analyzed many papers to reference work and created Python scripts in SageMath to gather data with graphs.
- Researched with a group to prove and write a paper in spectral graph theory (arXiv:2309.08548).

Research Assistant, ASSET, *Columbia, SC* Dec 2021 - Sept 2022

- Worked with a team to analyze and process 100+ hours of vibrational data, visualized to classify accuracy. Created scripts to process metadata of videos.
- Used LaTeX's TikZ package to create multiple layouts for rooms with accurate scale.

PROJECTS

Simplex Linear Programming Solver Fall 2022

- Built a program from scratch that solves any size linear program in standard form using the Simplex method.
- Coded in Python, utilizing Numpy.

Hotel Room and Flight Booking System Spring 2022

- Collaborated with a group to create a program that draws from a database of available hotel rooms and plane seats based on criteria given by the user.
- Used Git to collaborate, Java as the language, and MongoDB for the database.

RELEVANT COURSES

Computer Science: Advanced Programming Techniques, Software Engineering, Programming Structures, Data Structures and Algorithms, Foundations of Computation, Big Data Analytics

Mathematics: Multivariable Calculus, Linear Algebra, Ordinary Differential Equations, Discrete Mathematics I & II, Discrete Optimization, Analysis I & II, Abstract Algebra I Intro to Deep Neural Networks

SKILLS

Programming Languages: Python (Pandas, Numpy, Matplotlib), C++, Java, MATLAB, Bash, R
Technical Skills: LaTeX, Git, SolidWorks (CSWE Certified), HTML, Microsoft Excel

EXTRA-CURRICULAR ACTIVITIES

- Tau Beta Pi - Engineering Honors Society 2022
- Phi Beta Kappa - Academic Honors Society 2023