Eli Hatcher

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EDUCATION

University of South Carolina (Honors College) Columbia, SC
Bachelor of Science in Computer Engineering **Expected Graduation:** May 2027
Bachelor of Science in Mathematics **GPA:** 4.0
McNair Scholar - Recipient of top academic scholarship awarded to out-of-state students
Relevant Coursework: Advanced Programming Techniques, Data Structures and Algorithms, Financial Mathematics

RELEVANT EXPERIENCE

University of South Carolina Columbia, SC
Undergraduate Researcher (Improving quantum algorithms' efficiency using AI) **September 2023 - May 2025**

- Collaborated with team of 3 under professor's guidance applying reinforcement learning to quantum computing
- Achieved goal of improving algorithm efficiency by conducting literature reviews and writing Python code
- Secured $1000 funding for work through South Carolina Honors College Research Grant

Course Grading Assistant **January-May 2025**

- Provided feedback on 26 students' weekly proof-based problem sets for Transition to Advanced Mathematics
- Determined students' scores using discretion and basic guidance from professor
- Communicated with instructor on grading concerns and identified topics with which the class is struggling

REU: Summer School on Mathematical Foundation of Data Science **June-July 2024**

- Worked with team of 6 to build reinforcement learning models to disprove conjectures in extremal graph theory
- Designed and coded PyTorch model that found a graph with a higher fifth eigenvalue than previously known
- Researched, selected, and coded reward function for four unsolved conjectures

BlueDot Impact Virtual
AI Safety Fundamentals: Alignment Course **June-September 2024**

- Used SAELens library to identify features in GPT-2 related to deception and compare the model's output when the features' strengths were altered
- Learned about current and future risks from AI systems
- Studied approaches to mitigating AI risks, including reinforcement learning from human feedback, scalable oversight, unlearning, mechanistic interpretability, and technical governance

INTERNATIONAL EXPERIENCE

LTL Language School Taipei, Taiwan
Chinese Language Student **June-August 2025**

- Learned and practiced Mandarin Chinese through an immersive language program in Taiwan
- Utilized language and cultural competency to navigate daily life with a non-English-speaking host family and local community
- Achieved approximately intermediate language proficiency

Critical Language Scholarship Virtual
CLS Spark Chinese **June-August 2024**

- Accepted to selective program fully funded by the US State Department to study approximately one academic year of Mandarin Chinese over nine weeks
- Interacted with teachers, cultural instructors, and language partners from China using both Chinese and English
- Participated in cultural activities to better understand China and its people

LEADERSHIP EXPERIENCE

University of South Carolina Honors Caucus Columbia, SC
Treasurer **January 2024 - May 2025**

- Designed and created system for tracking funds in organization's inaugural year
- Balanced and allocated budget of approximately $5,000 from multiple funding sources
- Submitted funding requests to student government and handle reimbursement after events

SKILLS

- **Programming Languages:** Python, C++, R, Java, MATLAB, LaTeX, Q#
- **Libraries:** PyTorch, NumPy, NetworkX
- **Software Applications:** Linux, Git, GitHub, Jupyter Notebook, Visual Studio Code, Eclipse IDE, Microsoft Office (Word, Excel, PowerPoint), Google Suite (Docs, Sheets, Slides)