Ryan Bowering

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Education

Bachelor of Science, Computer Science (Summa Cum Laude) *Sept. 2021 - May 2024*
Rose-Hulman Institute of Technology (Terre Haute, IN) GPA: 3.91
Minors in AI, Data Science, Math and Music
Courses: AI, Generative AI, Deep Learning, Machine Learning, Bio-Inspired AI, Swarm Intelligence

Skills: Python, Java, C, SQL, JavaScript, React.js, PyTorch, Keras, Pandas, Scikit-Learn, MATLAB

Work Experience

Los Alamos National Laboratory - Post-Bac Researcher (Los Alamos, NM) *July 2024 - Present*
- Used generative AI to synthesize shock waveforms from a Shock Response Spectrum
- Developed the backend database connection for a data analysis tool in MATLAB

Rose-Hulman Institute of Technology - TA/Grader (Terre Haute, IN) *Nov. 2023 - Feb. 2024*
- Helped professors grade assignments for MA474 Theory of Computation
- Held in-person office hours to help students with classwork

Cummins Inc. - Software Engineering Intern (Columbus, IN) *June 2023 - Aug. 2023*
- Completely automated the External Recipient registration process for update notifications
- Applied Scrum/Kanban and used Python, React.js and AWS Lambda and APIGateway

Projects

Alert Infrastructure for IOT Devices (CSSE Department Award) *Sept. 2023 - May 2024*
- Created an infrastructure-as-code system in Python to streamline writing alerts for IOT devices
- Automatically deploys and schedules alerts as stored procedures in Snowflake
- Built a Slack bot to send alert notifications and interact with data in Snowflake

AI-Generated Image Detector GitHub *April 2023 - Nov 2023*
- Trained neural networks with Python to classify real and AI-generated images
- Achieved a testing accuracy of 98% by fine-tuning a Vision Transformer model
- Ran experiments and found that many images can be classified by their noise alone

Evolutionary Data Modeler GitHub *Aug. 2023 - Sept. 2023*
- Evolves equations to model input data with a tunable genetic algorithm
- Derived Kepler's third law using his available planetary data

Activities

- **ΧΑΣ Honor Society** *2024 - Present*
- **Rose-Hulman Swim Team** (Mental Attitude Award) *2021 - 2024*
- **Rose-Hulman Symphony Orchestra** *2022 - 2024*
- **Rose-Hulman Track and Field Team** *2024*

Hobbies: Swimming, Running, Clarinet, Chess, Rubik's Cubes, Video Games, Origami, Entomology