Andrew Kerr

B.S. Computational Physics & B.Mus. Percussion Performance
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PROFILE

- Highly dependable student with 5 years of experience developing quantitative and research skills
- Organized and efficient, working 10-15 hours/week on-campus while studying full-time since Fall 2019

EDUCATION

UNIVERSITY OF MICHIGAN
September 2018 - Present

BS Physics & BMus Percussion Performance

- 3.9 / 4.0 GPA
- Coursework: Programming and Data Structures, Computational Physics, Quantum Mechanics, Differential Equations, Multivariable Calculus, Math Methods of Theoretical Physics, Physics Labs

EXPERIENCE

RESEARCH ASSISTANT
April 2021 - Present

Glotzer Research Group, U of M College of Engineering

- Contribute code updates, bug fixes, and new features to molecular dynamics simulation software.
- Implement unit tests, benchmarking and profiling scripts for existing student-developed code.
- Create software demo examples in Jupyter Notebook and update technical documentation.

TRANSIT COACH OPERATOR
September 2020 - March 2021

U of M Logistics, Transportation & Parking

- Operate campus “Blue Buses” on various inter- and intra-campus routes.
- Provide safe, timely service and campus information to U of M students, staff, and faculty.
- Maintain detailed logs of driving metrics, including passenger counts, miles travelled, and departure and arrival times.

PHYSICS LEARNING ASSISTANT
September 2019 - December 2019

U of M Department of Physics

- Aid ~24 students in understanding Introductory Mechanics concepts as they are presented in real-time.
- Answer students’ questions thoughtfully and concisely, in order to facilitate group work assignments.
- Maintain a strong command of introductory mechanics concepts and problem-solving strategies.

PROJECTS

LORENZ ANIMATIONS
October 2021

- A basic CLI that allows users to specify initial conditions for up to five simultaneous Lorenz Attractors.
- Created with Python and Pygame (source code)

ONLINE AUCTION WEBSITE
August 2021

- Toy implementation of an e-commerce website on which users can register for accounts, create listings, and place bids.
- Created with Python, HTML/CSS, SQLite, Django, and Bootstrap (source code)

SKILLS

- Programming Languages: Python, C/C++, HTML, CSS, JavaScript, Bash, Markdown, LaTeX
- Technologies & Frameworks: Django, SQL Databases, Numpy, Matplotlib, VS Code, Git
- Technical Skills: Scientific Programming, Basic Data Analysis, Data Visualization