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Jesse Murray

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Education

Drew University, Madison, NJ

Aug 2016 – present

- Physics major, Mathematics minor (GPA 4.00)
- GRE: 169 Quantitative, 165 Verbal, 5 Analytical Writing

The Juilliard School, New York, NY

Aug 2015 – May 2016

- Cello Program

Research Experience

Drew University, Madison, NJ

- Research Intern advised by Dr. Minjoon Kouh, studying eye-tracking while solving anagrams using Tobii studio software. Designed a method to obtain clean letter sequence data by altering color contrast, location, and size of stimuli. Conducted an IRB approved study with 29 participants. Used pandas to clean, prepare, and analyze the data involving 1.8 million rows and 38 columns, and applied machine learning techniques. Presentation at the University of Scranton Brain and Behavior Conference on March 7th. May 2019 – present
- Research Assistant to Dr. Ryan Hinrichs. Studied adsorption rates of the atmospheric gas, Pinene, onto dust and sand samples through infrared spectroscopy under varying humidity and temperature conditions. Worked with Gaussian and analyzed results with IGOR Pro. May 2017 – Aug 2017

Work Experience

Drew University, Madison, NJ

- Research assistant for machine learning project, teaching assistant for special relativity class, and counselor at New Jersey Governor's School in the Sciences. Helped students in project about implementing machine learning with iRobot hardware for human detection, graded special relativity homework and tutored students. Jul 2019 – Aug 2019
- University Tutor for the Center for Academic Excellence at Drew University. Tutored physics I and II, calculus I, II and III, pre-calculus, statistics, astronomy, biology, chemistry, organic chemistry. Jan 2017 – Jan 2020
- Private Tutor for high school and college students. Tutored chemistry, physics, pre-calculus, and calculus. Jan 2017 – present.

Additional Experience

Drew University, Madison, NJ

- President of Math Club. Began weekly meetings on solving math problems and students giving talks about their projects or an interesting math-related topic. Began a professor talk series in which – three times a semester – a quantitative professor at Drew gives a math-related talk. Jan 2019 – Jan 2020

Morristown Medical Center, Morristown, NJ

- Intern, Emergency Department. Assisted medical staff with patient intake and evaluation. Sep 2018 – Dec 2018

Skills

- Fluent in Python and often use its libraries including NumPy, SciPy, Pandas, Sklearn, and Matplotlib. Working knowledge of MATLAB, C, R, and HTML.
- Use calculus, differential equations, and linear algebra extensively.
- Math, Python, and statistics projects. (jessemurray.com)
- Cello, piano, music theory, perfect pitch, and composition.

Awards, Scholarships, Honors Societies

- Arnold S. Boxer Memorial Prize in Physics (Spring 2019) Drew University Physics Department
- Sigma Pi Sigma: Inducted Spring 2019
- Phi Beta Kappa: Inducted Spring 2018
- Weddell Family Scholarship (Spring 2018) Drew University Physics Department
- John F. Ollom Prize in Physics (Spring 2017) Drew University Physics Department
- Dean's Transfer Scholarship (Fall 2016) Drew University