Julia Dreiling

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Education

Bachelors of Science in Data Analytics   August 2020 - May 2024
College of Arts and Sciences - Honors Program
The Ohio State University

Research

Undergraduate Researcher   October 2022 - Current
Lawrence Berkeley National Laboratory
Berkeley, California

- Working on the calibration and filter optimization system for the Gamma Ray Energy Tracking Array (GRETA) which will be used by nuclear physicists at Facility for Rare Isotope Beams (FRIB) to do gamma-ray spectroscopy
- Participated in Summer Undergraduate Laboratory Internship (SULI) to build the optimization pipeline for GRETA's detectors
- Researched the parameter space for detector calibration along with a variety of optimization methods for filter shaping parameters

Research Intern   June - August 2021
Michael E. DeBakey VA Medical Center
Houston, Texas

- Used Python to clean streptococcus data for feature selection and use in classification algorithms
- Used various out-of-the-box machine learning algorithms from the SciPy library to build a streptococcus classifier trained with the previously cleaned textual data
- Contributed to the overall project of automating the classification of clinical records for the VA hospital system

Work

Software Intern   June - August 2022
Dell Technologies
Austin, Texas

- Built an automated service request classifier that processed over 1.5 million transcript entries to pinpoint areas of product improvement for quality engineers
- Presented to a panel of managers and vice presidents on the new insights this classifier generated and future usage for Dell

Poster Presentations

Presented a poster on Gamma-Ray Energy Tracking Array (GRETA) Filter Parameter Optimization and Calibration at the CEU (Conference Experience for Undergraduates) poster session at 2023

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Fall Meeting of the Division of Nuclear Physics of the American Physical Society and the Physical Society of Japan, in Waikoloa, Hawaii on November 29th, 2023

Presented a poster on Gamma-Ray Energy Tracking Array (GRETA) Filter Parameter Optimization and Calibration at the SULI Summer 2023 Virtual Poster Presentation on August 9th, 2023.

Technical Skills

Proficient in C, C++, SQL, Java, Python, R, x86-64 assembly language, and MATLAB
Proficient with Anaconda, Tableau, Adobe XD, Adobe Illustrator, Adobe Premiere Pro, Microsoft Office, G Suite, and OBS

Languages

Fluent: English
Proficient: Chinese

References

Heather Crawford, Staff Scientist
Nuclear Structure Group
Lawrence Berkeley National Laboratory
HLCrawford@lbl.gov

Scott Traube, Manager
Dell Quality Analytics Engineering
Dell Technologies
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Michael Rayo, Assistant Professor
Department of Integrated Systems
Engineering
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Thomas Metzger, Assistant Professor of
Teaching Practice, Director of Undergraduate
Programs
Department of Statistics
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