Reed Hodges
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https://reedhodges.github.io/

Experienced in building mathematical models to explain complex data. Seeking a role as a data scientist.

EDUCATION

- Ph.D. in Physics
  Duke University, 2024
- B.S. in Physics, minor in Mathematics, summa cum laude
  Georgia Southern University, 2018

SKILLS

Python, SQL, R, C, C++, Fortran, HTML/CSS, Bash, Github, Pandas, NumPy, scikit-learn, Linux/Unix, Tableau, Power BI, AWS, Microsoft Office, Mathematica, MATLAB, OpenMP, CUDA

EXPERIENCE

Graduate Research Assistant
Duke University, Durham NC, 08/2018 to present

- Developed a new model to predict the lifetime of a newly discovered particle with 98% accuracy; earned the Goshaw Family Endowment in recognition of this work
- Derived over 30 new mathematical functions to model experiments and explain data from particle colliders
- Analyzed large datasets from particle physics experiments for use in theoretical modeling
- Managed the publicly-available codebases for various research projects, encouraging transparency and reproducibility
- Published 4 papers in top-ranked academic journals, playing a key role in research, writing, and presentation

Undergraduate Research Assistant
Georgia Southern University, Statesboro GA, 08/2015 to 05/2018

- Developed codes to identify a new micrometer-sized material that is invisible to certain wavelengths of light
- Published 2 research papers in peer-reviewed journals and presented the findings at national conferences

Petascale Computing Intern
Shodor Education Foundation, 06/2016 to 06/2017

- Transitioned the computation in my undergraduate research to utilize parallelization on GPUs
- Developed Fortran codes for modeling of the electromagnetic properties of small objects that had over 300 times faster runtimes than existing code