

SEYONG PARK

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EDUCATION

BS in Mathematics and Physics, University of Maryland, College Park Expected May 2024

Relevant Coursework: Electronic Circuits (In progress), Computational Physics, Intro to Matlab, Intro to Computer Systems/C programming

Montgomery Blair High School Math and Science Magnet Program 2016 - 2020

Relevant Coursework: AP Computer Science A (Java), Algorithms and Data Structures

SKILLS

Languages Python, R, Java, C, Javascript/Typescript, HTML/CSS, Arduino, LaTeX

Applications Git, Mathematica, Matlab, Autodesk Inventor

RELEVANT EXPERIENCE

NASA Software Development Intern May 2023 - Present

Goddard Space Flight Center *Greenbelt, MD*

- Contributed open-source software for modelling gravitational wave events to support the upcoming Laser Interferometer Space Antenna (LISA) mission to detect gravitational waves at millihertz frequencies
- Built a Python library from scratch to compute orbital trajectories around a spinning black hole and wrote tests using Python's unittest framework to compare the output to existing tools in Mathematica (See [Github](#))
- Wrote and published documentation using Sphinx/ReadTheDocs

REU (Research Experience for Undergraduates) in Topological Data Analysis May 2022 - July 2022

University of Wisconsin, Madison *Remote*

- Applied topological data analysis (TDA) to analyze differences in the distribution of warm and cold dark matter halos in the Copernicus Complexio N-body cosmological simulation using R and Python
- Designed and implemented a separate experiment to investigate problems created by overlap between different samples of dark matter halo data

Computer Science Research Intern June 2019 - Aug 2019

University of Maryland, College Park *College Park, MD*

- Collaborated with two other researchers to develop and implement algorithms for correcting bias in machine learning models
- Used Python to clean datasets, perform exploratory data analysis and train/retrain machine learning models
- Prepared and presented a poster at an event held by the Washington Academy of Sciences

AWARDS

USA Physics Olympiad Semifinalist 2020

One of 400 students nationwide to qualify for the semifinal round of the USA Physics Olympiad

US Presidential Scholar Candidate 2020

PUBLICATIONS

Transparency Tools for Fairness in AI (Luskin) 2020

M. Chen, A. Shahverdi, S. Anderson, S.Y. Park, J. Zhang, D. Dachman-Soled, K. Lauter, M. Wu. "Transparency Tools for Fairness in AI (Luskin)." Research in Mathematics and Public Policy, pp. 47-80.