Dulitha Jayakodige

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PORTFOLIO https://dulithajayakodige.github.io// https://www.linkedin.com/in/dulithajayakodige/

Ph.D. candidate in Theoretical Physics with 6 years of research experience. Expert in cleaning, analyzing, and visualizing large datasets from physics experiments. Self-learn Data Scientist who looks for an opportunity to exploit Physics, Mathematics, and Programming skills to create innovative solutions for real-world problems.

EDUCATION

Ph.D. in Theoretical Nuclear and Particle Physics (GPA:4/4) 12/2023
Hampton University, Hampton, VA

B.Sc. (Hons) in Physics, (GPA: 3.29/4) 01/2015
University of Colombo, Sri Lanka

CERTIFICATIONS

Deep Learning Specialization 11/2022
(https://www.coursera.org/account/accomplishments/specialization/JT7GSMPBQ2NF)

IBM Data Science Professional Certificate 03/2022
(https://www.coursera.org/account/accomplishments/professional-cert/87SKD667PENA)

PROFESSIONAL EXPERIENCE

Research Assistant 05/2019 - Present
Thomas Jefferson National Accelerator Facility, Newport News, VA

- Proposed a Pion Nucleon Scattering model based on Chiral Perturbation Theory and 1/Nc Expansion for getting a better agreement with experimental data
- Developed data cleaning, analyzing, and visualizing programs using Python and Mathematica for fitting large experimental data sets to various theories

Research Assistant 01/2016 - 04/2019
Graduate Physics Research Center, Hampton University, Hampton,VA

- Designed a Quantum Ghost Imaging experiment and prototyped it with a Monte Carlo simulation using Python and Matlab
- Built a data acquisition system to detect photons from a Photomultiplier tube using Matlab

Teaching Assistant 02/2015 - 05/2017
Hampton University, Hampton, VA and University of Colombo, Sri Lanka

- Taught and graded Introductory Physics Labs and tutorial classes for undergraduates
- Improved two lab experiments by automating and reducing data reading uncertainties using Matlab

SKILLS

- **Programming**: Python (NumPy, Pandas, Matplotlib, Seaborn, SciKit-Learn, Keras, TensorFlow), Mathematica, MATLAB, SQL, LaTeX, Java
- **Technical**: Data analysis, Data wrangling, Data visualization, Machine learning (Regressions, Decision Trees, k-Nearest Neighbor, k-Mean Clustering, Neural Networks, CNN, RNN)

AWARDS

- 2^{nd} place - Hackathon Organized by Artificial Intelligence for the Electron-Ion Collider