Rishik R, MSc. Physics

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Vizag, India

About Me

I have always been humbled by the boundless possibilities of Physics; its inherent communion with Mathematics, and the fact that every single statement has a physical significance. Through this passion, I have derived a great deal of appreciation for all the subspaces in this domain. I am keen on furthering the accessibility of science and look forward to bringing new technological innovations, particularly in the field of Quantum Information and Computing.

Education

2024 – 2026 **M.Sc. Physics, SSSIHL** (In addition, Quantum Computing).
Thesis title (Ongoing): *A comprehensive study of design and analysis of entangled photons in quantum computing.*
GPA: 8.6

2021 – 2024 **B.Sc. Physics (Hons), Sri Sathya Sai Institute of Higher Learning**.
Institute Moto: *The cultivation of human values alone is true education.*
GPA: 7.6

Internships

Nov - Dec 2023 **Computational Science and Molecular Modelling Simulations (CoSMoS),** SSSIHL

May - June 2024 **Summer School in Astronomy and Astrophysics,** Inter-University Centre for Astronomy and Astrophysics, Pune

Skills

Languages	Strong reading, writing and speaking competencies for English, Hindi, Telugu.
Softwares and Coding	Python, Scilab, Arduino, LaTeX, VMD, Obsidian …
Scientific Equipment	Panalytical X'Pert^3, SEM, TEM and Nanosurf STEM
Miscellaneous	Academic research, Scientific Outreach, Leadership, Problem Solving, Troubleshooting, Extremely Good Communication skills, Music Production

Research Experience

2024 **Proceedings of the DAE Symp. on Nucl. Phys. 68 (2024)**, Department of Atomic Energy, India

Academic Papers

- Excellent Prediction of two-neutron separation energies by the Garvey-Kelson Extrapolation Method

2023 - Mass and Q_β predictions of highly neutron rich Ga and As isotopes using Way-Wood diagrams

Research Experience (continued)

- Deployment of an Indigenously Designed Mini-Orange Magnetic Spectrometer for Nuclear Structure Studies

Projects

2024 **Topical Review of Eintein's General Theory of Relativity**
Studied and Analyzed various research papers in this theory. Started with tensor analysis and went forward till the Field Equations, without leaving the interesting history out. This was resiliently done during my Undergrad in Physics as an Open-Ended Project.

2025 **Quantum Entanglement: Fundamentals, measures and applications**
Studying the phenomenon of Quantum Entanglement and its various applications in the field of Quantum Computing and Information, through the NPTEL platform. Analysis also includes learning about the various modalities in QC, including superconducting qubits, trapped ions or entangled photons.

References

Available on Request