

SHIDAS KALAPPADAN

Providence, RI, USA
shidas.kalappadan@brown.edu
+91 7306129226

PROFESSIONAL SUMMARY

Physics graduate student with strong experience in Python, data analysis, and computational modeling. Skilled in working with large datasets, simulations, and statistical methods. Seeking entry-level roles in data analysis, research, or technical fields.

SKILLS

- **Programming:** Python, C++
- **Data Tools:** NumPy, Pandas, Matplotlib, Excel
- **Other Tools:** LaTeX, Microsoft Office
- **Core Skills:** Data analysis, statistical modeling, simulations, problem solving
- **Soft Skills:** Communication, teamwork, adaptability

EXPERIENCE

Research Student – Brown University

Condensed Matter Physics

- Developed Monte Carlo simulations using Python to analyze phase transitions in complex systems
- Worked with large datasets and applied statistical techniques for data interpretation
- Improved computational efficiency and accuracy in modeling disordered systems

Research Intern – IISER Tirupati

Astrophysics / Data Analysis

- Analyzed large astronomical datasets (5000+ objects) using Python
- Identified and classified variability patterns in stellar objects
- Applied data-driven techniques to detect trends and anomalies in time-series data

Research Intern – Florida State University

Nuclear & Computational Astrophysics

- Studied supernova explosion models using computational techniques
- Analyzed physical processes using simulations and theoretical models
- Collaborated in a research team to interpret astrophysical data

Research Intern – CUSAT

Micromagnetic Simulations

- Conducted simulations related to magnetic materials and spin dynamics
- Used computational methods to model physical systems
- Gained experience in scientific programming and modeling

Machine Learning Internship – Asteroid Analysis Project

- Built a system to estimate asteroid sizes using machine learning techniques
- Applied data processing and modeling for real-world scientific applications

Robotics Internship – SPACE Robotics

- Developed simulation code for different robotic systems
- Gained experience in programming and system modeling

PROJECTS

Spectrometer Development Project

- Built a functional spectrometer to analyze light spectra
- Conducted data analysis to measure wavelength and intensity
- Applied physics concepts to real-world measurement systems

EDUCATION

Master of Science in Physics

Brown University, USA

2023–2026

Bachelor of Science in Physics

Sacred Heart College, Kochi, India

2019–2022

GPA: 3.86 / 4

ACHIEVEMENTS

- Published research paper in International Journal of Scientific Research and Engineering Development (2025)
- Selected for Teach For India Fellowship
- Winner – International Space Science Competition
- Participated in AI/ML, Robotics, and Climate workshops conducted by IITs
- Summer school participant at Osaka university, Japan

EXTRA-CURRICULAR

- Academic Tutor (Physics), Brown University
- Athletics Academic Coach, Brown University
- Secretary – Energy Conservation Club
- Member of All India Council for Technical Skill Development

LANGUAGES

English, Malayalam, Hindi