



# Z Shaukat Aziz

shaukataziz@iisc.ac.in | +91 9444745270

Bangalore, Karnataka, India



github



linkedin

## SUMMARY

I am a Physics major in my third year of BSc Research program at the prestigious Indian Institute of Science (IISc), Bangalore. I have Demonstrated academic excellence with exceptional performance in CBSE board examinations and received a merit certificate for being among the top 0.1% of candidates nationwide in Computer Science. I always had a hobby of exploring new technologies and tools, after encountering the field of computational physics, I have developed a keen interest in programming and numerical simulations. So, I am Seeking opportunities to apply my analytical abilities and technical knowledge in research projects and try to contribute in this field while learning from experienced researchers.

## EDUCATION

### INDIAN INSTITUTE OF SCIENCE (IISc), BANGALORE

2022-Present

BSc RESEARCH - PHYSICS

- Third-year undergraduate student

Research-focused degree program

Coursework in Advanced Physics, Mathematics, and Computational Methods

### VELAMMAL VIDYALAYA, MEL AYANAMBAKKAM, CHENNAI

2020-2022

HIGHER SECONDARY (XII) - CBSE BOARD

- Science Stream with Computer Science

Overall Percentage: 96.4%

Received Certificate of Merit for being among top 0.1% candidates in Computer Science

### ALPHA WISDOM VIDYASHRAM, K.K. NAGAR, TRICHY

2018-2020

SECONDARY SCHOOL (X) - CBSE BOARD

- Overall Percentage: 96.4%

Additional Subject: Information Technology with NSQF Level-2 certification

## PROJECTS

### QUANTUM SYSTEMS SIMULATION

2025

DEVELOPER

- Implemented Python code for numerical simulations of various quantum systems based on computational methods from Korsch and Rapedius. Translated MATLAB implementations to Python using NumPy and SciPy for efficient matrix operations and eigenvalue calculations. Explored multiple quantum mechanical phenomena including Bloch Oscillations, Field-Flip Systems, Angular Momentum Systems, and Bose-Hubbard Dimer. Modeled open quantum systems using Lindblad master equations and analyzed tunneling dynamics in Double Well Potentials. Files available on GitHub.

## SKILLS

**PROGRAMMING LANGUAGES** **\*\*Experienced:\*\*** Python **\*\*Familiar:\*\*** MATLAB, C

**PACKAGES** NumPy | SciPy | Matplotlib | pandas

**DEVELOPMENT TOOLS** Git | GitHub | LaTeX | Linux | VScode

**LANGUAGES** **\*\*Fluent:\*\*** English | Hindi | Tamil

## EXTRA-CURRICULAR ACTIVITIES

- Sports enthusiast - Member of IISc Kho-Kho team and team convenor; enjoy playing Football and Foosball
- Volunteer at SFRI outreach program and participate in notebook drive @IISc regularly.
- Open-source software hunter with interests in exploring and contributing to scientific computing tools