

Rishi Vora

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5th Year BS-MS Student (Physics) at IISER Mohali

Education

 **Indian Institute of Science Education and Research (IISER) - Mohali** Mohali, India
2021 - 2026
INTEGRATED BACHELORS & MASTERS IN PHYSICS, WITH MINOR IN DATA SCIENCE (5 YEAR)

- **Relevant Courses:** Foundations of Quantum Mechanics and Quantum Information | Advanced Quantum Mechanics | Machine Learning and Artificial Intelligence | Introduction to Data Science | Algorithms and Complexity | Theory of Computation | Modelling Complex Systems | Nonlinear Dynamics, Chaos and Complex Systems | Computational Methods in Physics
- **CPI** (upto 8th Semester): 7.5 / 10

 **eduNova Science Higher Secondary School** Ahmedabad, India
2021
12TH - GUJARAT SECONDARY AND HIGHER SECONDARY EDUCATION BOARD

- **Grade:** A2 **Percentile:** 92.25

 **The H. B. Kapadia New High School** Ahmedabad, India
2019
10TH - GUJARAT SECONDARY AND HIGHER SECONDARY EDUCATION BOARD

- **Grade:** A1 **Percentile:** 99.54

Research Experience

 **Generative machine learning algorithm using quantum walks** June 2025 - Present
IISER PUNE

- **Guide:** [Prof. Santhanam](#), Professor at IISER Pune
- *Work in progress.*

 **Security proof of BB84 protocol** Summer 2024
IISER MOHALI

- **Guide:** [Prof. Arvind](#), Professor at IISER Mohali
- Reviewed working of BB84, B92 and E91 QKD protocols and worked out Shor and Preskill's security proof of BB84 protocol.

 **Quantum algorithms and circuit decomposition** Summer 2023
IISER MOHALI

- **Guide:** [Dr. Sandeep Goyal](#), Associate Professor at IISER Mohali
- Used Qiskit to implement basic circuits like Full Adder, Multiplier, Superposition Adder, and XOR adder. Studied Deutsch-Jozsa and Shor's algorithm, and partially implemented them. Also attempted implementing a circuit decomposition scheme by breaking down the gates into two level matrices and further reducing to universal set of gates using Solovay-Kitaev algorithm. Learnt basic QKD protocols.

Certificates

 **Qiskit Global Summer School 2024** 2024
IBM

- Received Certificate of Quantum Excellence
- Covered Circuit Transpilation, Modeling and Characterization of Hardware Noise, Execution on Noisy Quantum Hardware using Qiskit.

 **Qiskit Global Summer School 2023** 2023
IBM

- Received Certificate of Quantum Excellence
- Covered Dynamic circuits, Phase estimation, Factoring, Error mitigation, Variational Quantum Eigensolver and Iterative phase estimation and their implementation using Qiskit.

Skills

Technical Skills	Python (Qiskit, NumPy, Pandas, scikit-learn) Julia Linux (NixOS) LaTeX Typst Git, Github
Hobbies	Web Development FOSS contribution
Languages	English Hindi Gujarati

Scholarships

- Merit-Cum-Means Scholarship,**
2021 - present Awarded by the IISER Mohali as a bi-annual scholarship supporting Bachelor's and Master's studies

Leadership and Extracurriculars

- 2023 - 2024 **Convenor of Turing Club at IISER Mohali,**
Arranged Hackathons, Workshops, Talks.
Took help sessions for junior batches.
- 2024 **Volunteered for Foundation Day of IISER Mohali,**
Gave science demonstrations to school kids as a part of Turing Club.
- 2024 **Winning team at Polymathia Hackathon,**
Held as a part of **Insomnia 2024** (Cultural Fest) by Turing Club.
- 2021 - 2023 **Member of Astronomy Club at IISER Mohali,**
Winning team of the annual quiz in 2022, 2023, 2024.
- Web Development,**
2023 Lead Developer for website of **Inter IISER Cultural Meet (IICM2023)** - Cultural Fest across 10 National Institutes.
2022 Core member of Web Dev team for **Insomnia 2022** - Cultural Fest at IISER Mohali.
Designing and developing web pages for Phi@I (Physics Club) and Lumiere (Photography Club).