# PRITAM ACHARYA

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## EDUCATION

**Indian Institute of Science Education and Research (IISER)** — Pune, Maharashtra
*BS-MS, Mathematics* — *Aug. 2020 – Dec. 2025*

**D.A.V. Public School** — Cuttack, Odisha
*Intermediate, C.B.S.E. (95.2%) [Marksheet]* — *Apr. 2019 – Mar. 2020*

**D.A.V. Public School** — Cuttack, Odisha
*Matriculation, C.B.S.E. (96.6%) [Marksheet]* — *Apr. 2017 – Mar. 2018*

## EXPERIENCE

**Project on Multidimensional Random Walks [Report]** — May 2022 – Jul. 2022
*Guide: Dr. Anup Biswas [Completion Certificate]* — *Pune, Maharashtra*

- Examined "Simple Random Walks", their first visits, first returns, and 'Gambler's Ruin' problem using geometrical and combinatorial techniques.
- Examined multi dimensional random walks. Estimated asymptotically, the number of points a walk passes through using combinatorial and analytical techniques.
- Estimated the rate of escape to infinity of a random walk in more than 3 dimensions. Involved usage of discrete math, involved analysis techniques, and measure theory.

**Web Development** — Oct. 2020 – Present
*Websites developed: IISER Pune's iGEM wiki, Portfolio website* — *Pune, Maharashtra*

- Used HTML, CSS, and JavaScript to develop the structure, design, and functionality of the websites.
- Involved usage of node.js, and twitter bootstrap.

**Student Mentor** — Sept. 2020 – Feb. 2021
*D.A.V. Public School* — *Cuttack, Odisha*

- Mentored a select group of individuals in their senior year for science and math olympiads.
- Responsibilities included conducting mock tests, grading them, and providing students with necessary inputs. Encouraged students to come up with unique and different solutions to the same problem.

## SKILLS

**Programming Languages**: Python, and SageMath.
**Frameworks**: NumPy, Pandas, Tensorflow and matplotlib.
**Miscellaneous**: Proficient in LaTeX, git, MATLAB, MS Excel and gnuplot.
**Front-End**: HTML, CSS, and JavaScript.

## SCHOLASTIC ACHIEVEMENTS

- Ranked among the top 30% in the **Simon Marais Math Competition** globally. — *Dec. 2022*
- **Bronze Medalist** in **OPhO** (Online Physics Olympiad). World rank 10 in the open round, and world rank 17 in the invitational round. [Certificate] — *Jul. 2020*
- Scored **53/119** in **Indian National Chemistry Olympiad.** The median score was 32, qualifying marks for the next stage were 54.5. [Marksheet] — *Feb. 2020*
- Scored **35.5/80** in **Indian National Physics Olympiad.** The median score was 28.5. [Marksheet] — *Feb. 2020*
- Among the **Top 1% (National Level)** to qualify National Standard Examination in Chemistry (**NSEC**). Invited to appear in INChO. [Invitation] — *Jan. 2020*
- Among the **Top 1% (State Level)** to qualify National Standard Examination in Physics (**NSEP**). Invited to appear in INPhO. [Invitation] — *Jan. 2020*
- **Gold Medalist** in **Technothlon**, an exam of logic organized by IIT-Guwahati students, awarded with an **All India Rank of 5** among 50,000 candidates. [Certificate] — *Oct. 2019*
- Awarded with the **Kishore Vaigyanik Protsahan Yojana** Fellowship by Dept. of Science and Technology, Government of India. [Certificate] — *Feb. 2019*

## Key Courses Undertaken

**Physics**: Introductory Mechanics, Electrostatics, Introduction to Quantum Mechanics, Thermal and Statistical Physics, Classical Mechanics, Statistical Mechanics 1*
**Mathematics**: Single Variable Calculus, Multi Variable Calculus, Linear Algebra, Introduction to Probability, Advanced Linear Algebra, Discrete Structures, Real Analysis 1, Group Theory, Graph Theory, Ordinary Differential Equations, Point Set Topology, Rings & Modules, Statistical Inference, Real Analysis 2, Algorithms*, Natural Language Processing*, Measure Theory*, Cryptography*, Advanced Topics in Graph Theory*

*(\* marked courses to be completed by Apr. 2023)*

## Co-scholastic Achievements

- Co-founder and convener of FinStreet, the finance club of IISER Pune.                                    *2021*
- Semi-finalist in the **PCRA Saksham Quiz**. Represented the state of Odisha in the South Zonal Finals.   *2018*
- Runners-up in **Mettle Meet Quiz**. Awarded with a cash prize of ₹50,000.                                *2018*