

Ayush Singh

School of Physical Sciences
National Institute of Science Education and Research, Bhubaneswar

+91-87459-28569
ayush.singh@niser.ac.in

Education

- **National Institute of Science Education and Research** Bhubaneswar, OD
Integrated Masters', (Current CGPA: 8.88) July 2017 – May 2022
 - Relevant Coursework
 - * Physics: Statistical Mechanics Quantum Mechanics, Classical Mechanics, Special Relativity, Electromagnetism, Nuclear Physics
 - * Mathematics: Real Analysis, Metric Spaces, Group Theory
 - * Computer Science: Theory of Computation, Algorithms and Data Structures, Discrete Structures (Combinatorics and Graph Theory)
- **Delhi Public School International** Ghaziabad, UP
All India Senior Secondary Certificate Examination, (with 94.6% aggregate) May 2017
 - Subjects taken: Mathematics, Physics, Chemistry, Economics, English
- **Delhi Public School International** Ghaziabad, UP
All India Secondary School Examination, (with 10 CGPA) May 2015
 - Subjects taken: English, Hindi, Mathematics, Science, Social Sciences

Academic Experience

- **National Initiative on Undergraduate Science** Mumbai, MH
Homi Bhabha Center for Science Education, TIFR June 2018
 - Series of lectures on Quantum Mechanics, Quantum Information and Quantum Computation, Astronomy and Astrophysics, Many Body Physics.
 - About 30 hours of independent lab work.
- **Summer Reading Project on Lie groups and Lie algebras** Mumbai, MH
Indian Institute of Technology Bombay May – July 2019
 - Project guide: Dr. Sanjoy Pusti, Department of Mathematics, IIT Bombay
 - Topics covered: Metric topology, topological groups, Lie algebras, Baker-Campbell formula, irreducible representations of $\mathfrak{sl}(2)$.

Student Projects

- **Coding Club** Bhubaneswar, OD
National Institute of Science Education and Research
 - Fall 2019: Organized a series of student seminars on *quantum computation and quantum information*
 - Fall 2019: Organized a 'hackathon' about reverse engineering a web API
 - Spring 2019: Helped organize an introductory series of student seminars on algorithms.
 - Spring 2019: Gave a student seminar on *Divide and Conquer algorithms*.

- **MathematiX Club** Bhubaneswar, OD
National Institute of Science Education and Research
 - Gave a student seminar on *2-adic Numbers*.
 - Conducted a MathToys toy-making session on *Klien bottles*.
- **Software Development Group** Bhubaneswar, OD
National Institute of Science Education and Research
 - Have been one of the founding members of the Software Development Section of the institute.
 - Familiar with web technologies – able to work with the frontend (HTML, CSS, vanilla JavaScript) as well as the backend (SQL, Django).

Skills

Programming Languages: Proficiency in C/C++, Python, R, JavaScript, Bash scripting.

Operating Systems: Linux (Arch Linux, Debian and its derivatives), Windows.

Applications: \LaTeX , Vim, GNU Plot.

Interests

Computers: Enjoy using and learning Linux systems, Building electronics projects at home, Web development, and writing software.

Musical: Playing guitar and bass.