Pranjal Singh

Third-year Undergraduate
Department of Computer Science and Engineering

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Academic Qualifications

Year	Degree/Certificate	Institute	CPI/%
2021 - Present	Bachelor of Technology	Indian Institute of Technology Kanpur, Kanpur	9.0*/10
2021	AISSCE - CBSE (XII)	K V NAL Campus, Bengaluru	96.6%
2019	AISSE - CBSE (X)	K V NAL Campus, Bengaluru	98.2%#

#Two centums   *Major CPI: 9.5

Scholastic Achievements

- Awarded the Academic Excellence Award for 2021-22 by the institute
- JEE Advanced 2021 – Secured **All India Rank 216**
- JEE Main 2021 – Secured **All India Rank 413** and scored the highest marks in mathematics in two sessions
- KVPY (SX) 2021 – Secured **All India Rank 131**
- KVPY (SA) 2020 - Secured **All India Rank 434**
- Indian Olympiad Qualifier (Mathematics) 2020 – Qualified with rank 2 in KVS
- Indian Olympiad Qualifier (Chemistry) - 2020 – cleared with a Certificate of Merit
- Cleared the **Regional Mathematics Olympiad** in 2019

Coursework

Institute:	Discrete Mathematics	Logic in Computer Science
	Probability and Statistics	Data Structures and Algorithms
	Computer Organisation	Operating Systems *(Ongoing)*
	Algorithms - II *(Ongoing)*	Theory of Computation *(Ongoing)*

MOOCs: Introduction to Psychology (Coursera) [verify]   *(Jun '23 - Jul '23)*

Involvements

- **An Introduction to Theoretical CS** (Stamatics Summer Projects, student-run)   *(May '23 - Jul '23)*
  - Mentored a reading group for freshers on some topics in theoretical CS and abstract algebra
  - Presented group theory and an introduction to the theory of computation, using boolean circuits and automata as examples [beamer]
- Proof Complexity Reading Group: Presented the paper *The Intractibility of Resolution* containing the first superpolynomial lower bound on resolution proof size. [scribe]

Course Projects

- Unified Portal for Hall Automation ⍥ (CS253 - Software Dvpt. & Operations)   *(Jan '23 - Apr '23)*
  - Built a portal for automating billing in the mess and canteen of a hall, booking guest rooms, raising housekeeping requests, issuance of sports equipment, booking gym slots and sports courts
  - Designed UIs for all five players - students, sports secretary, hall/canteen/mess managers
  - Documented the software requirement, software design, implementation, testing and user manual
  - Used the **Django framework** and **CSS** and did unit, intergration and system testing
- Bubblesort in Verilog ⍥ (CS220 - Computer Organisation)   *(Mar '23 - Apr '23)*
  - Designed a minimal processor in Verilog HDL and executed bubblesort on an integer array
  - Created a **Turing-complete instruction set** with logical, arithmetic and branch instructions

Technical Skills

- Languages: C, Python, Verilog
- Software/Utilities: Fusion 360, Autodesk Inventor, QTSpim, LaTeX
- Exposure: C++, Bash, awk, NumPy, Pandas, Django, Qiskit, HTML/CSS, JavaScript, SQL

Miscellaneous

- Attended a Suicide Prevention Gatekeeper Training workshop organised by Suicide Prevention India Foundation and the institute Counselling Service and received a Certificate of Course Completion
- Member of the School Choir Group