



# Nimish Sehgal

Bachelor of Technology  
in Mathematics and Computing  
Indian Institute Of Technology, Ropar

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## EDUCATION

Degree	Institute/Board	CGPA/Percentage	Year
Bachelor of Technology	Indian Institute of Technology, Ropar	8.97 (Till 4th Sem)	2022-Present
Senior Secondary	The Senior Study II, Amritsar (CBSE)	97.6%	2022
Secondary	Holy Heart Presidency School, Amritsar (ICSE)	98.6%	2020

## EXPERIENCE

- Antier Solutions** May 2024 - June 2024  
*Software Engineer Intern* Mohali, On-site
  - Worked on development of an Arbitrage Bot based on DeFi, utilizing blockchain technology.
  - Conducted in-depth analysis of transaction flows using the EigenPhi platform to identify profitable arbitrage opportunities.
  - Devised a successful strategy that involves sending extra amounts to the builder, significantly enhancing transaction profitability.
  - Collaborated with the team to integrate findings and algorithms into the larger project framework, ensuring seamless operation and robust performance.

## PROJECTS

- Blockchain Implementation and Hashing Functions** Oct 2023 - Nov 2023  
*Data Structures Course Project under Dr. Anil Shukla* GitHub
  - Implemented a voting system using a blockchain, with votes recorded and stored in a Merkle Tree, an Advanced Data Structure, which itself is part of a single block.
  - Developed a menu-driven interface for voters, as well as password-protected options for administrator control of the system itself.
  - Implemented three modern hashing functions, namely SHA-256, SHA-3 and BLAKE2B, which are state-of-the-art in the current cryptography landscape.
- Expenza** May 2024 - June 2024  
*Web Development / Project / Website* GitHub
  - Developed a robust full stack Expense Management website powered by the MERN stack, offering an intuitive platform for users to seamlessly add new transactions, modify and delete their existing transactions.
  - Implemented user authentication for secure access and integrated date frequency filters for viewing transaction.
  - Displayed category-wise percentage breakdown of expenses and income.
  - Technologies Used - Node.Js, Express.Js, React.Js, MongoDB
- CFMetrics** Jun 2024 - Jul 2024  
*API / Web Development / Project / Website* GitHub
  - A web application that allows users to track various metrics related to Codeforces. It monitors tags of solved questions, ratings of problems, rank statistics, and unsolved questions.
  - Virtual rating change feature enables users to see potential rating changes and expected rank based on virtual contest performance. Users can input virtual performance data such as round ID, points, penalty, and old rating to simulate contest outcomes.
  - Technologies Used - HTML, CSS, JavaScript
- Minor Projects**  
*Self*
  - BrickBash** : JAVA | Implemented brick-breaker in JAVA using OOPS | GitHub
  - SkyCast** : HTML, CSS, JavaScript | RealTime Weather Website | API | GitHub
  - Sort-Spectra (Sorting Visualizer)** : Python | Visualization of Sorting Algorithms using Matplotlib | GitHub

## TECHNICAL SKILLS

- Programming Languages**: C, C++, Java, Python, MATLAB
- Full Stack Development**: HTML, TailwindCSS, JavaScript, Bootstrap, Node.js, React.js, Express.js, MongoDB
- Tools & Libraries**: Android Studio, VS Code, Github, LaTeX, BlueJ, Arduino IDE

## KEY COURSES TAKEN

- CSE & Maths**: Data Structures and Algorithms, Discrete Mathematics, Theory of Computation, Probability and Statistics, Real Analysis, Differential Equations, Linear Algebra, Calculus
- Others**: Signals & Systems, Basic Electronics, Macro & Micro Economics, Physics for Engineers, Chemistry for Engineers, History of Technology

## POSITIONS OF RESPONSIBILITY

- Assistant Internship Coordinator**, Career Development and Placement Cell, IIT Ropar May 2024 - Present
- Branch Representative**, Mathematics and Computing, IIT Ropar Dec 2022 - Present
- Co-Head**, Maths Arena, ADVITIYA'24 - Technical Fest, IIT Ropar Nov 2023 - Feb 2024
- Student Mentor**, ISMP, IIT Ropar Aug 2023 - Present

## MISCELLANEOUS

- ICPC Asia Kanpur - Mathura Regional Contest**, Rank 400 2023
- Specialist on Codeforces, Handle - Nimbu1310**, having Max Rating of 1436 2024
- Top 7% CGPA Holder**, Awarded Institute Merit Scholarship for being in top 7% of the batch 2023
- Semi-Finalist in Hackon With Amazon**, Season 4 2024
- JEE Advanced**, All India Rank 3106 2022
- District Topper**, Matric Indian Certificate of Secondary Education Examination 2020
- Winner - The Battle of Brains**, The Quizzing Reality Show, Among all northern states 2019