



Nitesh Kumar
Bachelor of Technology
in Computer Science and Engineering
Indian Institute Of Technology, Ropar

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GitHub | Website
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EDUCATION

Degree	Institute/Board	CGPA/Percentage	Year
Bachelor of Technology	Indian Institute of Technology, Ropar	6.6 (Till 5th Sem)	2021-2025
Senior Secondary	Central Board of Secondary Education	97%	2021
Secondary	Central Board of Secondary Education	95	2019

PROJECTS

- **Data Encryption** Aug. 2022 - Nov. 2022
Data Structure and Algorithm, Prof. Anil Shukla **GitHub**
 - Developed a data encryption project in C, utilizing a binary tree data structure for efficient encryption and decryption operations.
 - Implemented encryption algorithms to convert plaintext data into encrypted form using the binary tree structure.
 - Designed and executed decryption algorithms to accurately decrypt encrypted data and retrieve the original plaintext, ensuring data security and confidentiality.
- **RISC-V Simulator** Jan. 2023 - May 2023
Computer Architecture, Prof. Neeraj Goel **GitHub**
 - Created a 32-bit RISC-V simulator in C++, supporting both single-cycle and pipeline modes for executing machine code.
 - Implemented a simulated memory hierarchy with various cache levels, enabling analysis of performance metrics like CPI, miss rate, and hit rate.
 - Implemented state calculation, memory hierarchy management, and branch prediction algorithms to achieve accurate simulation of the RISC-V architecture.
- **Smash Coaching** May 2023 - July 2023
HTML/CSS, javascript, Node js, Express, MongoDB **Website**
 - Led the development of 'Smash' an interactive JEE/NEET coaching website.
 - Utilized HTML/CSS and JavaScript for frontend development, providing a visually appealing and user-friendly interface.
 - Implemented a secure login/register portal using Node.js, Express, and MongoDB, ensuring authenticated access for students and faculty members.
- **Metro Route Finder** June 2023 - July 2023
Data Structure and Algorithm, C++ **GitHub**
 - Developed a C++ coded project for metro route finding, focusing on determining the shortest time and distance between two metro stations.
 - Implemented graph data structure to represent the metro network, with stations as vertices and routes as edges, enabling efficient path calculations.
 - Utilized Dijkstra's algorithm and heap data structure to optimize the computation and provide efficient extraction of minimum distances during route finding.

TECHNICAL SKILLS

- **Programming Languages:** C/C++, HTML/CSS, Javascript, Python, SQL
- **Web Development:** HTML/CSS, Javascript, React.js, Node.js, Express, MongoDB, Three.js, RISC-V
- **Data Science:** Python Programming, Numpy, Pandas, Matplotlib, Seaborn, Scikit-learn, Tensorflow, Keras
- **Developer Tools and other:** VS Code, Git, GitHub, Linux, Jupyter Notebook, Google Colab, Power BI, Excel

KEY COURSES TAKEN

- **CSE :** Data Structures and Algorithms, Digital Logic Design, Discrete Mathematics, Computer Architecture, Programming Paradigms and Pragmatics, Operating Systems, Database Management System, Computer Networks, Cryptocurrencies and Blockchain Technology
- **Maths:** Calculus, Linear Algebra, Differential Equations, Probability & Statistics
- **Others:** Signal and System, Micro and Macro Economics

POSITIONS OF RESPONSIBILITY

- **Team Lead at Techno-Cultural fest,** Hospitality Team, IIT Ropar Feb. 2023 - March 2023

MISCELLANEOUS

- **Jawahar Navodaya Vidyalaya,** Selected Among 1% at district level 2014
- **UPSC-NDA,** Qualified for SSB Interview 2021
- **JEE,** Ranked in top 1% in JEE Mains and Advanced 2021
- **Rann-Neeti'22,** Silver Medalist in IIT Mandi's Sports Fest 2022
- **Inter IIT,** Quater Finalist in 55th and 56th Inter IIT Sports Meet 2022
- **Codeforces,** Specialist Handle : *Mr.BruceWayne* 2024