Ritik Sharma

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Skills

- **Languages**: C++, Python, R
- **Frameworks**: Scikit-learn, TensorFlow, PyTorch, Keras, Pandas, Numpy, Matplotlib,
- **Tools/Platforms**: Google Colab, Jupyter NoteBook
- **Soft Skills**: Time management, Patience, Adaptability, Multi-tasker

Projects

- **Vision-Driven Real-Time Vehicle Tracking System** **Feb 2025 – April 2025**
  Developed a real-time vehicle tracking system using YOLOv8 to detect and track vehicles across video frames. The system performs lane-wise vehicle counting and classifies traffic intensity based on vehicle density, supporting traffic surveillance and congestion analysis in smart cities. It was optimized for speed and accuracy to function in real-time scenarios using live or recorded feeds.
  Tech: Python, YOLOv8, OpenCV, Computer Vision

- **Machine Translation** **Sept 2024 – Nov 2024**
  Built a machine translation model to translate text from one language to another using Natural Language Processing (NLP) techniques. This project focuses on tokenization, sequence modeling and translation accuracy improvement.
  Tech: Python, NLTK, TensorFlow, Transformer Model, Seq2Seq, Language Processing

- **Library Management System** **June 2024 – July 2024**
  Developed a Library Management System using C++ and DSA that streamlined book tracking by 20%, resulting in a 15% increase in library user satisfaction. Implemented features for book management, issuance/return and due date tracking.
  Tech: C++, Data Structures & Algorithms, File Handling.

Trainings

- **C++ Training Program** **Jan 2025 – Feb 2025**

  Conducted by Hitbullseye through the University
  - **Covered topics***:* Object-Oriented Programming (OOP), Pointers, Data Structures, Algorithms, and Advanced C++ Concepts.
  - Hands-on coding practice and problem-solving.

- **Data Structure & Algorithm** **June 2024 – July 2024**

  Conducted by Board Infinity through the Self-Paced
  - **Covered topics***:* Arrays, Linked List, Stacks, Queues, Hash Tables, Trees, Graphs, Tries.
    Covered Algorithm*:* Sorting Algorithms, Searching Algorithms, Recursion and Backtracking, Dynamic Programming, Greedy Algorithms, Divide and Conquer, Graph Algorithms, String Algorithms.
  - Hands-on coding practice and problem-solving.

Certificates

- Problem Solving (Basics) ||Hackerrank — November 2024
- Social Network Analysis || NPTEL — July 2024 – October 2024
- Build AI Apps with ChatGPT, Dall-E, and GPT-4 || Coursera — January 2024 – May 2024
- Dynamic Programming Greedy Algorithms || Coursera — January 2024 – February 2024
- C++ Programming || NeoColab — August 2023 – January 2024
- Data Structure and Algorithms || NeoColab — August 2023 – January 2024
- Data Structure and Algorithms || NeoColab — August 2023 – January 2024
- Python (Basics) || Hackerrank — February 2023

Education

Lovely Professional University — Punjab, India
Bachelor of Technology - Computer Science and Engineering; ***CGPA: 6.8*** — *September 2022 - Present*

High School Udkagaon — Gopalganj, Bihar
Intermediate; ***Percentage: 76.2%*** — *April 2019 – April 2021*

High School Uchkagaon — Gopalganj, Bihar
Matriculation; ***Percentage: 78.2%*** — *March 2018 - March 2019*