



Jay Goel

Bachelor of Technology
in Electrical Engineering
Indian Institute Of Technology, Ropar

+91-9650353407
jaygoel7@gmail.com
GitHub | Website
linkedin

EDUCATION

Degree	Institute/Board	CGPA/Percentage	Year
Bachelor of Technology	Indian Institute of Technology, Ropar	8.71	2022-2026
Senior Secondary	Central Board of Secondary Education	96%	2022
Secondary	Central Board of Secondary Education	96.6%	2020

EXPERIENCE

• IIT Roorkee

05/2024 - Present

Research Intern ML (Guided by Dr. Pradeep Singh)

- Conducting research on Convolutional Neural Networks (CNNs) and their variants, including Equivariant CNNs and Steerable CNNs, with a focus on improving network generalization and accuracy in complex visual recognition tasks.
- Engaging in an in-depth review of cutting-edge research papers and publications in the field of deep learning, contributing to the understanding of the latest advancements and emerging trends in CNN-based architectures.
- Explored and gained a deep understanding of Transformer architectures and Large Language Models (LLMs), focusing on their applications in text generation, summarization, and question-answering tasks

PROJECTS

– Pathfinding Algorithm Visualization Project

08/2024 - 11/2024

Course Project - DSA

Github

- Developed a pathfinding visualization tool implementing Dijkstra's, Greedy, and Bidirectional Search algorithms, ensuring real-time and interactive user experience.
- Integrated pathfinding algorithms with live map visualization, enabling real-time route optimization and enhancing user interaction with geographic data.
- Designed modular data structures (e.g., Graph.js and Node.js) for efficient map modeling, ensuring scalability and adaptability for future enhancements.

– Sentiment Analysis

05/2024 - 06/2024

Machine Learning

Github

- Designed a sentiment analysis app using Flask and VADER Sentiment enabling accurate text sentiment classification.
- Configured a responsive frontend with JavaScript to support real-time user interaction and dynamic feedback.

– PES Website

12/2023 - 01/2024

Team Project

Github

- Designed and developed the website for the Pehchaan Ek Safar Organisation as part of the front-end development team.
- Employed Figma to design website views and enhance the user interface. Utilized HTML - CSS for responsive web pages
- Acted as the interface between the content writing team and the web development team to ensure seamless integration of organizational content.

– Personalised Movie Recommendation System

10/2024 - 11/2024

Jupyter Notebook

Github

- Developed a Movie Recommendation System using Collaborative and Content-Based Filtering techniques, incorporating Python and Scikit-learn to recommend movies based on user preferences
- Implemented cosine similarity and matrix factorization to enhance the system's recommendation accuracy and performance

– Campground Management System

05/2024 - 07/2024

HTML, CSS, JavaScript, NodeJS, MongoDB, Mongoose and Cloudinary

Github

- Built a secure Campground Management System with user authentication, enabling registered users to add, edit, and delete campgrounds. Integrated MongoDB for data storage and Cloudinary for image uploads.
- Implemented robust access control to ensure secure viewing and management of content, preventing unauthorized access to sensitive data and features.

TECHNICAL SKILLS

- Programming Languages:** C, C++, Python, CSS, HTML, Javascript, MySQL, R, Pytorch
- Libraries/Frameworks:** Pandas, Numpy, OpenCV, ReactJs, NodeJs, Matplotlib, Flask, Scikit-learn
- Developer Tools:** VS Code, Canva, Figma, GitHub, Google Colab, Tinkercad, Jupyter Notebook, MySQL, Excel
- Key Courses Taken:** Introduction to Computing and Data Structures , Data Structures and Algorithms, Web Developer Bootcamp (Udemy) - certification course, Control Engineering, Digital Circuits, FNCO2 - certification course on Finance

POSITIONS OF RESPONSIBILITY

- Vice-President ,Pehchaan Ek Safar**, NGO run by students of IIT Ropar 05/2024- 05/2025
- Head ,Inter School Conclave**, Advitya'25 ,Annual Technical Fest of IIT Ropar 11/2024 - 02/2025
- Member of PR and Website Committee** ,Department of Electrical Engineering and school AIDE 05/2024 - Present
- Coordinator** ,Content and Graphic Designing Team, Placement Cell, IIT Ropar 09/2023 - Present

MISCELLANEOUS

- Ideathon**, Won first prize in the Ideathon proposed by Softcom Club, IIT Ropar, at Corporate Connect 2.0.
- Social Service**, Member and Group Captain of National Service Scheme (NSS) , IIT Ropar, for first four semesters.
- Olympiad Achievements**, Gold Medalist - (IMO - Maths) 2021, 2018, 2017, and Silver Medalist - DAV French Olympiad 2019