Yash Sehgal

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Portfolio | LinkedIn | GitHub | LeetCode

EDUCATION

Indian Institute of Technology, Mandi   **Himachal Pradesh, India**

B.Tech in Computer Science and Engineering, CGPA : 6.96   Expected June 2026

Relevant courses: Data Structures and Algorithms, Design of Algorithms, Machine learning, Formal Language and Autometa Theory, Mathematical Foundations of Computer Science, Information Database Systems, Programming in Python, Probability and Statistics, Statistical Foundations of Data Science.

PROJECTS

- **Efficient Convolution Models for Abnormal Heartbeat Signal Detection | Link for GitHub**   *January, 2024*
  Python, Machine Learning, TensorFlow, Keras, Data Science
  – Developed a Python-based heartbeat analyzer using TensorFlow and Keras to classify ECG data, Enhanced model precision through data augmentation techniques; significantly improved the prediction accuracy upto 99 per cent

- **Collaborative Document Web App with AI summarization | Link for GitHub**   *October, 2024*
  Next JS, ReactJS, Tailwind CSS, Clerk, LiveBlocks, ShadCn, Firebase, OpenAI
  – a collaborative document editing app , enabling real-time editing and teamwork within a shared text editor. Integrated AI summarization functionality using OpenAI, allowing users to generate concise document summaries.
  – Implemented secure user authentication and authorization using Clerk, Text Editor using Liveblocks and Blocknote, and Google Firebase for real time database operations.

- **A RAG based Chat Bot | Link for GitHub**   *January, 2024*
  Large Language Model, Retrieval Augmented Generation, Hugging Face, Langchain, Python
  – Leveraged a LLM Chat-bot using advanced pre-trained models, including Mistral 7b, Mistral 8x7b, Llama2 7b, and Llama2 70b and tried to compare the results for each model.

- **Sorting Visualizer | Link for GitHub**   *June, 2024*
  Data Structures and Algorithms, ReactJS, Tailwind CSS   https://sorting-visualizer-blond.vercel.app//
  – Built a "Sorting Visualizer" to demonstrate sorting algorithms through animations, implemented **5** sorting algorithms : Bubble Sort, Merge Sort, Selection Sort, Quick Sort, and Insertion Sort for educational purposes.

- **Namaste-Mart(An E-commerce Web App) | Link for GitHub**   *June, 2024*
  ReactJS, Firebase, Redux-Toolkit, Tailwind CSS   https://namaste-mart-opal.vercel.app/
  – Developed and Hosted a responsive E-commerce Web application using ReactJS, With state management via Redux-Toolkit and ContextAPI, established protected routes for separate types of users.
  – Utilized Google Firebase for real-time database operations and secure user authentication.

SKILLS

- **Languages:** C++, JavaScript, TypeScript, Python, SQL, NoSQL
- **Frameworks/Libraries/Tools:** ReactJS, NextJS, NumPy, Pandas, TensorFlow, Keras, Redux, Redux-Toolkit, Tailwind-CSS, Matplotlib, Git, GitHub, GSAP, Figma, Docker
- **Database and OS Platform:** MongoDB, Firebase, Windows, Linux

ACHIEVEMENTS

- Co-authored a research paper published in "Texila International Journal of Public Health" with title "Efficient Convolution Models for Abnormal Heartbeat Signal Detection "
  DOI: 10.21522/TIJPH.2013.12.02.Art025   *June, 2024*
- Our Group-68 was selected among the 14 groups for SEED grant from Catalyst IIT Mandi to develop our project into a startup further   *May, 2024*
- Among the Top 15 teams out of 125 in KrackHack'24 Hackathon organised by GDSC IIT Mandi   *April, 2024*
- Solved 250+ ques on LeetCode, GeeksforGeeks and Interviewbit

POSITIONS OF RESPONSIBILITY

- **Core Team member:** SnTC Web Development Team   *September, 2023*
- **Tutor:** Mentored a group of 5 students in the Course IC-102p to make a To-fro memory robot.   *March, 2024*
- **Teaching Assistant:** In course IC-152 : Computing in Data Science   *August, 2024*
- **Team Head:** Miraz'2024 Videography Team, lead a team of 25+ volunteers   *April, 2024*

CERTIFICATIONS

- **Udemy**: Mastering Data Structures and Algorithms in C++   *March, 2024*
- **Energy Swaraj Foundation**: Organizer Certificate for the Climate Clock Assembly and Design Workshop *March, 2024*
- **Linked In**: Certification Of Completion of Course "Introduction to Career Skills in Software Development" *June, 2024*
- **Ministry of Electronics and IT**: Certificate of participation in "Bootcamp on Drone Technology"   *July, 2023*