

Mrigank Mouli Singh

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—  [GitHub](#)

EDUCATION

Degree	Institute	Board/Uni	CGPA/Percentage	Year
B.Tech CSE	IIIT Sonepat	IIIT Sonepat	7.1 (Till 6th Sem)	2022–2026
Senior Secondary	KV AFS Yelahanka	CBSE	75.00%	2022
Matriculation	Ryan Intl. School, Yelahanka	ICSE	94.60%	2020

SKILLS

- **Programming Languages:** C, C++, Java, Python, SQL, HTML, CSS, JavaScript.
- **Machine Learning Frameworks and Libraries:** Pandas, Numpy, Matplotlib, Scikit-Learn, OpenCV, Pytorch, Tensorflow
- **Web Development Frameworks and Libraries:** React.js, Express.js, Node.js.
- **Databases:** MongoDB, MySQL, SQL, AWS, Microsoft Azure(365).
- **Development and Collaboration Tools:** Git/GitHub, Linux, Docker, VS Code, Eclipse/IntelliJ IDEA, Kanban, Jupyter, MATLAB.
- **Concepts and Algorithms:** Data Structures and Algorithms (DSA), Operating System (OS), Computer Networks(CN), Object-Oriented Programming (OOP), Database Management Systems (DBMS), Full-Stack Web Development, AI/ML.

ACHIEVEMENTS

- Total DSA problems solved **300+**, Received **334** globally in biweekly contest 159 ([Leetcode](#)).
- Achieved **1** at Algozenith coding contest organized by IIIT Sonepat.

PROJECTS

Sign Language Detection [GitHub](#) — Keras, OpenCV, TensorFlow **February 2025 - April 2025**

- Developed a real-time ASL recognition system with **92% accuracy** across **10,000+ labeled images** using CNNs.
- Reduced gesture prediction latency to **200ms** for live webcam input, enabling smooth real-time communication.
- Built a user-friendly application with responsive interface, improving accessibility for **20+ test users** across varied conditions.

Mrichat Demo — React.js, Nhost Auth, Hasura GraphQL, n8n, OpenRouter **July 2025 - August 2025**

- Secured email-based access with Nhost Auth and enforced Row-Level Security (RLS) across **500+ chats**, ensuring **100% data isolation**.
- Enabled real-time messaging via Hasura GraphQL subscriptions, reducing latency to **150ms** and boosting engagement by **35%**.
- Powered AI responses with n8n workflows and OpenRouter API, achieving **92% accuracy** across **2,000+ daily messages**.
- Strengthened backend security through role-based permissions, eliminating **all unauthorized data access attempts**.

Responsive Travel Website [Demo](#) — React.js, Node.js, Express.js, MongoDB **June 2024 - July 2024**

- Built a full-stack travel platform ensuring **100% cross-device compatibility** across mobile, tablet, and desktop.
- Designed a clean UI with **5+ interactive features** (image sliders, hover effects, smooth navigation), boosting demo user engagement by **35%**.
- Integrated a **MongoDB backend** for destination storage and user queries, achieving query response times under **150ms**.
- Optimized performance with load times under **2 seconds**, improving responsiveness by **40%** compared to prototype.

COURSE WORK

Data Structures — Algorithms — Database Management Systems (DBMS) — Operating Systems — Computer Network — Automata And Formal Language — Compiler Design — Object-Oriented Programming (OOP) — Software Engineering — Big Data — IOT — Artificial Intelligence Machine Learning