



ADIT RASTOGI

Course : B.E., Computer Science Engineering, 2026

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CGPA : 7.60



Subjects / Electives	Data Science Minor, Data Mining, Machine Learning, Foundations of Data Science, Generative AI, Data Structures and Algorithm, Computer Programming, Discrete Structures for Computer Science, Database Systems, Object Oriented Programming, Theory Of Computation
Technical Proficiency	C/C++ STL, Web Development, Git, HTML + CSS, JavaScript, MERN, Object-Oriented Programming (OOP), Java, Data Science, Python, Unity

WORK EXPERIENCE

Student Researcher, Assemble Them All (Prof.Tathagata Ray)

Jan 2025 - Jun 2025

- Designed and implemented an **Assembly-by-Disassembly** algorithm to generate efficient, robust, and highly structured assembly sequences for large-scale mechanical systems.
- This method leverages assembly-by-disassembly principle and **physics-based simulation** to efficiently explore a reduced search space.
- We Achieved a **97.9%** accuracy rate by **progressive BFS** algorithm, outperforming other industry-standard algorithms like RRT (94.8%).

INTERNSHIPS

Summer Developer Intern, Ankle Gaming

May 2024 - Jul 2024

- Developed **Ludo 3D** using the **Unity Engine**, integrating designs created with **Blender** for an immersive and comprehensive gaming experience.
- Designed and implemented an intuitive and visually appealing interface for game board.
- Executed complex game logic and mechanics, including dynamic dice rolls and real-time interactions to enhance gameplay realism.

PROJECTS

Elevator Manager OS Level Elevator Scheduling Simulation - POSIX IPC, C, Operating Systems

Oct 2024 - Nov 2024

- Built a C-based simulator for managing up to **100 elevators** across **500 floors** using **pipes, message queues, and shared memory** for inter-process communication, enabling precise coordination and high-throughput elevator scheduling under intense heavy load conditions.
- Designed scheduling logic to serve **30+ passenger requests/turn**, minimizing total turns while ensuring real-time coordination and movement.
- Integrated **authorization protocols** via solver processes, dynamically generating and verifying strings based on elevator occupancy.
- Demonstrated robust understanding of inter process communication, process control and resource sharing, which are key concepts in Operating System.

Full Stack Twitter-Clone - Web Development

Feb 2025 - Jul 2025

- Developed and **Deployed** a full-stack Twitter clone using the **MERN** stack, implementing core social media features such as **post** creation, comments, likes, follow/unfollow, authentication, and notifications, with seamless, and highly responsive user experience.
- Engineered a responsive, modern UI with **Tailwind CSS**, featuring suggested users to follow using **TanStack Query (React Query)** for efficient data fetching, caching, and synchronization.
- Integrated **Cloudinary** for scalable image upload and storage.
- Deployed the application to production, enabling end-to-end functionality with secure backend APIs.

Eye In-Painting with Exemplar Generative Adversarial Networks (GAN) - Generative AI

Mar 2025 - May 2025

- Implemented **Exemplar GAN (Ex-GAN)** architecture to perform identity-preserving eye in-painting using exemplar methods, as proposed in the **Facebook AI research paper**.
- Trained a dual-branch GAN architecture with a U-Net-based **generator and discriminator** to handle face realism and eye-specific detail.
- Utilized a curated dataset of **celebrity face** image pairs (original + reference eyes), selected to ensure high-quality, diverse facial features and varied expressions for robust training and reliable evaluation of generative model performance.

EXTRA CURRICULAR ACTIVITIES

Member, BITS Comedy Club

- Contributed to the vibrant campus culture by participating in **stand-ups** and other **comedic performances** and fostering laughter and joy among **4000-5000** fellow students enhancing my public speaking and **communication skills**.

Organising Committee Lead, TechWeek'23

- Spearheaded the execution of 3-day event at BITS Pilani Hyderabad Campus, boasting an impressive footfall of approximately **2000-3000** students, enhancing my management skills, and leadership abilities.