

Prakhar Gupta

Indian Institute of Technology, Goa

Fourth Year **Undergraduate**, **Computer Science and Engineering**

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Education

BTech, Computer Science and Engineering , Indian Institute of Technology Goa	CGPA : 7.53/10	2021 – Present
Class 12, CBSE , St.Xavier's High School, Ailwal	Aggregate: 93.2 %	2019 – 2021
Class 10, ICSE , Jyoti Niketan School, Atlas Tank	Aggregate: 95.4 %	2017 – 2019

Experience

Technology Analyst, ProcDNA

(Jan 25 – Present)

- Hands-on experience with **Snowflake**, **Databricks**, Spark, and data warehousing, supporting both backend data exploration and data mart creation.
- Automated QC processes in **PostgreSQL** by aggregating data from source data lakes and target data marts, validating data integrity through covariance checks at regular interval using **triggers**.

Projects

Flappy Bird [Github]

(May 24 – Jun 24)

- Developed a 2D Flappy Bird clone in **Unity (C#)** with Rigidbody2D physics for gravity and collision handling.
- Implemented **object pooling** to optimize memory usage and reduce garbage collection overhead.
- Designed an event-driven architecture using Unity's Event System Delegates for game state management.

WRKFLOW [Github]

(May 24 – Jun 24)

- Built Dashboard Web App which is a powerful tool for individuals looking to enhance their productivity by effectively tracking goals and managing tasks. Its **MERN** stack foundation with MVC architecture ensures a reliable, robust and scalable application.
- Integrated Client-Side Rendering (**CSR**) with React for a responsive user interface ensuring initial load times of under 2 seconds.
- Handled Backend by Express.js and **Mongoose**, integrated with MongoDB which supports rapid query execution with average response times for CRUD operations below 50 milliseconds.

Super Unity Mario [Github]

(May 24 – Jun 24)

- Recreated Super Unity Mario which is a classic platformer game developed in **Unity** inspired from the iconic 1985's Super Mario series, featuring original mechanics focusing initially on the 1st level.
- Introduced unique platforming mechanics, such as advanced player movement with acceleration and deceleration dynamics. Jump mechanics include variable jump heights based on input duration, enhancing player control.
- Implemented with a robust **game manager** system handling various aspects such as player health and lives management, scoring mechanisms of 100 points per coin collected, checkpoint systems at level start, sprite animations and 60 fps deployment.

Skills

Programming Skills:	C, C++, C#, Python, JavaScript, TypeScript, Bash, MIPS Assembly.
Software Skills:	Auto-CAD, Solid works, Unity, Git, GitHub, VS, VS Code.
Frameworks/Libraries and OS:	Ubuntu, Fedora, Windows, Node, Express, Spring Boot, Bootstrap, React, MongoDB, Mongoose, OpenCV, OpenGL, SDL, CUDA C, Posix.
Relevant Coursework	Data Structures and Algorithms, Algorithm Design, Computer Networks, Machine Learning, Artificial Intelligence, Computer Architecture, Compiler Design, Unix Tools, Computer Vision, Deep Learning.

Positions of Responsibility

Wing Representative	Hostel Wing Representative in Student Panchayat	(2022 – 2023)
Core-Member	Alpha - Finance Club of IIT Goa	(Mar 23)
Event Overseer	Cepheus KBC Event Overseer	(2023 – 2024)

Extracurriculars & Hobbies

- Committed to environmental stewardship, volunteering with Varaha, the Climate Change Society of IIT Goa, to clean various beaches.
- Gaming enthusiast, engaging in fps, strategic, indie and open-world gameplays.
- Competitive table tennis player, participating in tournaments and friendly matches in spare time.
- Dedicated bookworm with a love for literature, exploring diverse genres and authors.