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

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.

Novel AutoComplete [Github] (May 24 – Jun 24)
- Developed and implemented a **LSTM** neural network architecture that effectively captured long-range dependencies in text, resulting in a 30% improvement in the model's performance compared to recurrent network on complex literary datasets.
- Built on TensorFlow with nominal encoding such as one-hot encoding.
- Implemented **Beam Search** for decoding text sequences. Beam search selects the most likely sequences, which improves the quality and coherence of the generated text.
- Trained on Alice in Wonderland and Frankenstein novels, generating text that reflects the distinctive characteristics of these classic works.

Lab Coordinator [Github] (Feb 24 – Mar 24)
- Deployed Lab assessment web application for seamless coordinating between students, TAs and other faculties managing multiple hierarchical user login and respective privileges, tested for more than 50 simultaneous logins.
- Used **SQL** based relation database management system SQLite, an open source which supports ACID (Atomicity, Consistency, Isolation, Durability) transactions providing query execution time of less than 1 millisecond.
- Developed using **NodeJS** and **EJS** for accessing Javascript runtime environment and Javascript template engine respectively.

Skills

Programming Skills:	C, C++, C#, Python, Java, Haskell, JavaScript, TypeScript, Bash, SQL.
Software Skills:	Git, GitHub, VS, VS Code, IntelliJ IDEA, Anaconda, PowerBI, Excel, Tableau.
Frameworks/Libraries and OS:	Ubuntu, Fedora, Windows, NodeJS, ExpressJS, Spring Boot, Bootstrap, React, MongoDB, Mongoose, TensorFlow, Sci-kit-learn.
Relevant Coursework	Data Structures and Algorithms, Algorithm Design, Computer Networks, Machine Learning, Artificial Intelligence, Computer Architecture, Unix Tools.

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.