



Pankaj Yadav

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B.Tech - Computer Science and Engineering

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EDUCATION

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech.	Indian Institute of Technology, Guwahati	7.02 (Current)	2020-Present
Senior Secondary	CBSE Board	94%	2019
Secondary	CBSE Board	95%	2017

EXPERIENCE

- **Jio Platforms Limited** May 2023 - Jul 2023
AI COE Intern Bangalore
 - Spearheaded data enhancement through **feature selection** and synthetic **data generation**, resulting in a **20%** improvement in data quality by reducing noise. Additionally, streamlined processes led to a **15%** increase in analysis efficiency.
 - Demonstrated mastery in advanced clustering, especially **HDBSCAN**, achieving precise pattern extraction from complex datasets. This precision improved decision-making accuracy by **25%** and reduced computational resource usage by **30%**.
 - Pioneered custom **similarity analysis** and advanced **frequency domain** techniques, effectively revealing recurring patterns within intricate time series data. These innovations led to a significant **40%** improvement in data insights, enhancing interpretation for more informed decision-making.

PROJECTS

- **Operating System - xv6** Sep 2022-Nov 2022
CS344 Course Project Github
 - Implemented an **SJF** and **Round Robin** based scheduling algorithm and tested it for CPU I/O bound processes
 - Incorporated **lazy memory allocation** and paging using **LRU** replacement mechanism for active processes.
- **Travel Planner** May 2022-Jun 2022
Personal Project Github
 - Developed a user-centric web app, reducing route calculation time by **30%** through optimized **Dijkstra's algorithm** with a time complexity of **O(ElogV)**. Empowered users to find optimal city routes, considering both bus and plane options.
 - Utilized **JavaScript**, **HTML**, **CSS**, and **vis.js** to create an intuitive interface. Generated **60%** more diverse travel scenarios, improving user experience and trip planning, all while reducing route calculation times.
- **URL Shortner** Jan 2022-Feb 2022
Personal Project Github
 - Developed a robust URL shortening solution using **Node.js** and **Express.js**, optimizing **asynchronous** operations and adhering to **RESTful API** principles. Employed **MongoDB** with Mongoose to ensure efficient data management.
 - Integrated **URL redirection** and **click tracking**, enhancing user experience and analytics. Implemented shortid for unique short URLs, achieving an impressive **9-character** length, significantly improving user-friendliness.

TECHNICAL SKILLS

- **Programming:** C++, C, Python, Java*
- **WEB Technologies:** HTML, CSS, JavaScript*, MySQL, MongoDB*, Node.js
- **Miscellaneous:** LaTeX, Verilog*, NumPy, Pandas
- **Operating Systems:** Windows, Linux* * Elementary proficiency

KEY COURSES TAKEN

- Machine Learning
- High Performance Computing
- Operating System
- Data Structures
- Database Management System
- Computer Architecture and Organisation
- Design and Analysis of Algorithm
- Computer Networks

POSITIONS OF RESPONSIBILITY

- **VPO Elite**, Student Gymkhana Council, IIT Guwahati Jul 2022-Mar 2023
 - Partnered with the Vice President to strategize and organize events for a student body exceeding **8,000**.
- **Core Team Member**, Social Service Club IIT Guwahati Apr 2021-Mar 2022
 - Coordinated a **COVID relief** initiative that provided assistance to over a **500** individuals across India.

ACHIEVEMENTS AND EXTRACURRICULARS

- **Leetcode Weekly Contest 360**, Secured **Global Rank 186** among 30000+ contestants. 2023
- **Codeforces Round 755**, Secured **Global Rank 954** among 13000+ contestants. 2021
- **Codechef Starters 42**, Secured **Global Rank 405** among 2500+ contestants 2021
- **G20 2023**, Volunteered at the G20 meeting hosted by IIT Guwahati. 2023
- **PM Visit**, Volunteered **2000+** students during the Prime Minister's visit at AIIMS Guwahati 2023
- **Inter IIT 2022**, Secured **4th** position in Hockey at Inter IIT sports meet 2022 organised by IITR and IITD. 2022
- **Techvince 2022**, Won the **Best Project Award**, Audience's Choice at Techvince organised by Techboard IITG 2022
- **Spardha 2023**, Led the team to victory, securing **bronze** medals in Hockey and TT at Spardha 2023 2023