Jatin Gupta

Bachelor of Technology
in Computer Science Engineering
Indian Institute Of Technology, Ropar

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Education

Degree	Institute/Board	CGPA/Percentage	Year
Bachelor of Technology	Indian Institute of Technology, Ropar	7.52 (Till 5th Sem)	2020-2024
Senior Secondary	Central Board of Secondary Education	93%	2020
Secondary	Central Board of Secondary Education	86%	2018

Projects

- **Railway Reservation System** *November 2022 - December 2022*
  Database management system **Github**
  – This Project Facilitates passengers to book tickets, Passengers has to provide train number and date of journey for which the ticket is to be booked
  – Through concurrency control protocols, it can manage simultaneous access from multiple users to the database system.
  – PostgreSQL is used as the primary data warehouse for this project, Front-end Part is designed using Java.
- **Dynamic-Graph-Connectivity** *Nov 2022 - Dec 2022*
  Algorithm Design **Github**
  – The project aims to Find connectivity in Fully Dynamic Graph in PolyLogarithmic Time per Operation.
  – The implementation is based upon the **research paper** published by Monika Henzinger and Valerie King.
  – It outputs Whether two nodes are connected or not, User can add or delete edges whereas number of nodes would be fixed.
- **Implementation of Utility-Based Cache Partitioning** *April 2022 - May 2022*
  Computer Architecture **Github**
  – The goal of this project is to implement Utility Cache based partitioning (UCP) in Champsim, a trace-based microarchitecture simulator using **C++** language.
  – In Multicore Processors, the lowest level cache is shared by all cores, So instead of static partitioning Using utility-based partitioning, allocated dynamic cache memory to different cores to Minimise Miss count.
- **Syntax Checker For C Language** *Mar 2022 - Apr 2022*
  Deepti R. Bathula **Github**
  – This Toy Compiler Performs Lexical Analysis and Syntax Analysis for given piece of code Using Lex And Yacc.
  – The code was tokenised using Lex, and the tokens were parsed using Yacc.
- **Smart Car Parking System using Verilog** *Oct 2021 - Nov 2021*
  Digital Logic Design **Github**
  – The Main Objective of This Project is to automate parking System implemented Using Finite-state machine in verilog HDL.
  – This project ensures the safety of Parked cars and prevents collisions between entering a car and exiting cars.
- **Web Projects** *June 2021 - Aug 2021*
  Personal **Github**
  – Youtube **Clone** developed Using React And React Libraries. Data is fetched from Youtube API.
  – Responsive Portfolio **Website** developed Using HTML, CSS, JS

Technical Skills

- **Programming Languages**: C/C++, Javascript, Python, Java, Perl
- **Front-End Web Technologies**: HTML5, CSS, Bootstrap, React
- **Libraries/ frameworks/ OS**: Matplotlib, Numpy, Pandas, Linux, git, Tinkercad, Latex

Key courses taken

- **CSE**: Algorithm & Data Structure, Computer Architecture, Programming Paradigms, Digital Logic Design
- **Maths**: Discrete Mathematics, Probability and Statistics, Advanced Calculus and Linear Algebra
- **Others**: Economics, Signals and Systems, Basic Electronics , Tinkering Lab

Positions of Responsibility

- **Team Member, Event Management Team**,Zeitgeist, IIT Ropar *Apr. 2021 - May 2021*
- **Team Member, Publicity Team** ,Advitiya, IIT Ropar *Apr. 2021 - May 2021*
- **JEE Mentor**,S.H.V.M School *Dec. 2020 - June 2021*

Achievements/Certificates

- **Qualified JEE Advanced 2020**, Among top 1% *2020*
- **Qualified JEE Mains 2020**, Among top 1% *2020*
- **Competitive Programming**, Global Rank 168 CodeChef Starters 31 Division 2 *Codechef*
- **Complete JAVASCRIPT with HTML5,CSS3 from zero to Expert-2022**, Completed Udemy Course *Udemy*
- **Intro to React: Build a Youtube App 2021**, Completed Udemy Course *Udemy*
- **Master C++ Programming From Beginner To Advance**, Completed Udemy Course *Udemy*