Nakul Jain

Senior Year Undergraduate

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Academic Qualifications

Year	Degree/Certificate	Institute	CPI/%
2018 - Present	B.Tech in Computer Science and Engineering	Indian Institute of Technology, Kanpur	7.3/10
2018	CBSE(XII)	Ram Krishna Vidya Mandir, Gwalior	95.2%
2016	CBSE(X)	Gwalior Glory High School, Gwalior	10/10

Scholastic Achievements

– Received the **Academic Excellence Award** for exceptional academic performance in 2018-19 at IIT Kanpur
– Secured an All India Rank **175** in **JEE Advanced** 2018 and All India Rank **98** in **JEE Mains** 2018
– Achieved All India Rank of **457** and selected for **Kishore Vaigyanik Protsahan Yojana (KVPY)** fellowship in 2017-18
– Received an **Excellence award** for scoring **100**% in Chemistry in CBSE 12th Board

Internship Experience

Qualcomm | Software Development Internship | Team: NR 5G   *(May'21-Jul'21)*
– **Objective:** Automate the **MAC Profiling Parser** program and improve the readability of **F3 Error Messages**
– Implemented the **auto downloading feature** of the multiple log packets from **Axiom cloud server** using **Python, xml, json**
– Stored all the log packets with required **CRM Build Ids** in **MongoDB** and learnt to plot graphs using **Bokeh Module**
– Studied the **enum replacement script** and appreciated the working of **clang compiler** and errors it produces on **LTE logs**
– Developed a **user-friendly interface** for structured view of error messages based on **sorted order** of their total count

Demux Academy | Full Stack Developer Internship | Supervisor: Eng. Varun Garg   *(Apr'20-Jun'20)*
– **Objective:** Set up **AWS EC2** web server and configure different services through Virtual Hosting and MySQL as DB Host
– Developed a **Movies Searching Web-App** using Node.JS, React, Express which uses **OMDB API** to display desired movies
– Stored the data in **MySQL** and deployed the application using **AWS EC2** Ubuntu image and Elastic IP load balancer
– Virtually hosted through **ApacheV2, Confd Configuration, Version Control, DNS Config** and then on a **live domain**

Key Projects

C to x86 Compiler | Supervisor: Prof Amey Karkare   *(Jan'21-Apr'21)*
– Implemented a mini C compiler having Source language **C**, Implementation language **C++**, and Target language **x86** Assembly
– Performed **Lexical, syntax & symantic analysis** and produced abstract syntax tree in dot script and generated assembly code
– Used **3 Address Code** as intermediate language to act as a bridge between high-level source & low-level assembly language

Analysing Databases | Supervisor: Prof Arnab Bhattacharya   *(Mar'21-Apr'21)*
– Analysed relational databases and non-relational databases of different sizes by running them over **4 different queries**
– Compared effects of **varying sizes, relations, indexing and database management systems** by plotting multiple graphs
– Databases used Sqlite3, MariaDB (SQL) and MongoDB(NoSQL) and Language used **Python**

GemOS | Supervisor: Prof Debadatta Mishra   *(Aug'20-Nov'20)*
– Implemented system calls like **open, read, write, close** and functionalities like **Paging, File System and Message Queues**
– Executed memory management operations with provisions for **mmap, munmap and huge page creation**
– Developed a debugger in OS with functionalities like setting/removing breakpoints, wait/continue, disabling/enabling breakpoints

Tic Tac Toe against Computer | Self Project   *(Jul'20)*
– Developed a software for Tic Tac Toe game by implementing an **intelligent bot** which is based on **Minimax Algorithm**
– Created a user-friendly interface using HTML5, CSS, Javascript to play it online

Authentication Portal | Self Project   *(Dec'19)*
– Created a portal to authenticate a user via **REST-endpoint API-Google OAuth** with email and password
– Developed a web application with Node.js, Express, Passport, and MongoDB to enable user-friendly demos

Technical Skills

Languages: C, C++, Python, Bash, Node.JS, React, Express, Javascript, CSS, HTML5
Tools: Git, Vim, LaTeX, Docker, AWS, MongoDB, MySQL, Msc-Generator

Relevant Courses   *Ongoing*

Introduction to Computing	Compiler Design	Database Management	Operating Systems
Theory of Computation	Software Development	Advanced Algorithm	Data Structure and Algorithms
Machine Learning*	Probability	Linear Algebra and ODE's	Discrete Mathematics

Positions of Responsibility

Manager - Technocruise | Techkriti   *(Oct'19-Apr'20)*
– Built and coordinated team of **20** volunteers for smooth conduction of workshops
– Successfully collaborated with various MNCs including Adobe, Cisco for organising workshops in 28 cities with **4000+** participants

Senior Executive - TOSC | Techkriti   *(Jul'19-Oct'19)*
– Successfully conducted Techkriti Open School Championship(TOSC) exam in various cities with more than 2000 participants