

Nakul Jain

Senior Year Undergraduate | CSE | IIT Kanpur

✉ nakuljn@iitk.ac.in | 🌐 nakuljn | 📄 nakuljain20

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 **All India Rank 175** in JEE Advanced 2018 and **All India Rank 98** in JEE Mains 2018
- Secured **All India Rank of 457** in Kishore Vaigyanik Protsahan Yojana (KVPY) 2018
- Received an **Excellence award** for scoring **100% in Chemistry in CBSE 12th Board**

Internship Experience

Qualcomm | Software Development Internship | Supervisor: Eng. Diwakar Panchamgam (May'21-Jul'21)

- Objective:** Automate the **MAC profiling parser** program and improve the readability of **F3 Error Messages**
- Researched and Analysed various Databases such as MySQL, MongoDB and compared them for our use case.
- Implemented the auto downloading feature using **Python** of multiple log packets and then storing them in **MongoDB**
- Created a user-friendly interface using to view the Error Messages in browser generated by running clang on the LTE logs.
- Made a call flow of the complete profiling code using **Msc-Generator** and presented the work to the entire team

Demux Academy | Web Development 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 setup
- Created a short Application using a tech stack including CSS, JS, React, Node.js, and used it as a primary project
- Tech involved include AWS EC2 Ubuntu image, Elastic IP load balancer, Virtual Hosting through ApacheV2, Confd Configuration, Version Control, DNS Config and full stack for our microservice

Selected Projects

C to X86 Compiler | Supervisor: Prof Amey Karkare (Jan'21-Apr'21)

- Implemented a mini C compiler having source code 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

GemOS | Supervisor: Prof Debadatta Mishra (Aug'20-Nov'20)

- Implemented various functionalities of GemOS such as **Paging, File System and Message Queues**
- Executed memory management operations with provisions for mmap, munmap and huge page creation
- Implemented scheduling using a round-robin scheme, and Object Store functionalities for a basic file-system

Tic Tac Toe against Computer | Self Project (Jun'20-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 **HTML, CSS, Javascript** to play it online.

Authentication Portal | Self Project (May'20-Jun'20)

- Created a portal to authenticate a user via REST-endpoint API Google OAuth with email and password
- Implemented the software on a web application with Node.js, Express.js, Passport.js, and MongoDB

Technical Skills

Languages: C, C++, Python, Bash, Node.JS, React, Express, Javascript, CSS, HTML5

Tools: Git, Vim, Latex, Docker, AWS, MongoDB, SQL, Msc-Gen

Positions of Responsibility

Manager - Technocruise | Techkriti' 20 (Aug' 19-Mar'20)

- Leadership:** Built and co-ordinated a team of 20 volunteers to ensure smooth conduction of workshops
- Initiative:** Successfully collaborated with various MNCs including Adobe, Cisco for organising workshops in 28 cities
- Achievement:** Successfully conducted workshops in different cities comprising of 4000+ participants

Relevant Courses

*Ongoing Courses

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

Extra-Curricular Activities

- Mentored students in Academic Mentor-Menteeship Program 2021-22
- Senior executive in TOSC(Techkriti Open School Championship) and Show Management in Techkriti'20.
- Played keyboard in various musical events such as Musical Extravaganza, Acoustic Night