

# Udit Prasad

4<sup>th</sup> Year Undergraduate  
Department of Computer Science and Engineering

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📍 uditpd3000 | in Udit Prasad

## Academic Qualifications

Year	Degree/Certificate	Institute	CPI/%
2020 - Present	B.Tech	Indian Institute of Technology Kanpur	8.8/10
2020	Class XII (CBSE)	ABR Foundation School, Sasaram	95%
2018	Class X (CBSE)	DAV Public School, Sasaram	96.6%

## Scholastic Achievements

- Secured **AIR 1105** in **Joint Entrance Exam(Advanced) 2020** among 0.15 million shortlisted students
- Secured **98.86 percentile** in **Joint Entrance Exam(Mains) 2020** among 1.2 million candidates
- Recipient of prestigious **Kishore Vaigyanik Protsahan Yojana Fellowship Award 2018** conducted by **IISc, Bangalore**
- Awarded with **Academic Excellence Award** in the academic year 2021-22 for outstanding performance

## Experience

- **Seeders Media LLP** | Software Development Intern May'22 - Jul'22
  - Worked on a **SaaS platform** for digital publishers to **create and publish articles** developed using **Django Framework**
  - Enhanced the **functioning** of the product by making **key changes** related to members and publisher agencies
  - Incorporated features like **Trending Twitter Column, Tag-wise articles, and meta tags**
  - Explored various topics like **Automated Facebook posts, Twitter APIs, PostgreSQL**, and many more
- **Salesforce** | Software Engineering Intern May'23 - Present

## Projects

- **JAVA\_to\_x86 Compiler** | Course Team Project, **CS335** 📄 Jan'23 - Apr'23
  - Implemented a compiler for a fully functional subset of **JAVA** language with assembly generated in **x86-64 ISA**
  - Designed lexer, parser, semantic analyzer and code generator using **Flex, Bison** and **C++** programming language
  - Incorporated features such as operators, classes, objects, methods, recursion and multi-dimensional arrays
- **surakshIIT** | Course Team Project, **CS253A** 📄 Jan'22 - Apr'22
  - Developed a potential software to be used by **campus residents and Security officials** for **security purposes**
  - Incorporated features like **Lost and Found, Hall entry/exit and Campus entry/exit**
  - Designed user-side using **ReactJS** and server-side using **Django Framework** along with **SQLite** as a database
- **SPO Career Portal** | Summer Project: **Programming Club, IIT Kanpur** 📄 June'21 - Aug'21
  - Collaborated with team to develop a fully-fledged **portal** for **Students Placement Office, IIT Kanpur**
  - Designed **user interface** using **React JS** to facilitate the application process for both students and the recruiters
  - Implemented the **server side** using **Django Framework** and tested the various **APIs** using **Postman**
- **Building xv6-riscv - Operating System** | Course Team Project, **CS330A** 📄 Sep'22 - Nov'22
  - Implemented various **user and system calls** as well as features like **semaphores** and **condition variables**
  - Designed scheduling policies like **SJF, Unix Scheduler** using both **pre-emptive** and **non pre-emptive** techniques
  - Awarded **300 out of 300** demonstrating outstanding performance in the project
- **InfoSec101** | Association of Computer Activities(**CSE**), IIT Kanpur May'21 - Aug'21
  - Examined various fields of InfoSec like **Web Exploitation, Reverse Engineering and Basic Cryptography**
  - Solved various **CTFs** across the web exploring various fields of InfoSec using tools like **BurpSuite and Radare2**
- **SAT Solver and Sudoku-pair Generator & Solver** | Course Project, **CS202A** 📄📄 Feb'22
  - Designed optimal **SAT Solver** using **Back-tracking Algorithm** in **CPP** which takes CNF as an input
  - Designed a **Sudoku-pair Generator and Solver** using **SAT Solvers** which generates and solves 2nxn sudoku-pair puzzle
- **Untyped Lambda Calculus in Haskell** | Course Project, **CS350A** Nov'22
  - Designed a grammar checker for **Untyped Lambda Calculus** using **functional programming** concepts in Haskell
  - Implemented features including **substitution** and **beta reduction** using **recursive descent parsing** technique
- **Library Management System** | Course Project, **CS253A** 📄 Mar'22
  - Implemented Library Management System in **C++** Language using **Object Oriented Programming concepts**
- **Spam Classifier** | Course Project, **CS253A** 📄 Mar'22
  - Designed a python program to predict the emails to be spam or not processing the data using **Bag-of-Words** representation
  - Compared accuracy and AUC upon **Support Vector Machine (SVM)** and **K-Nearest Neighbour (KNN)** classifiers

## Technical Skills

- **Programming Languages** : Python, C, C++, JavaScript, Verilog, Assembly language, Haskell
- **Frameworks and Libraries** : Django, ReactJS, Numpy
- **Others** : Git, L<sup>A</sup>T<sub>E</sub>X, PostgreSQL, MySQL

## Relevant Coursework

*\* Ongoing Courses*

Compiler Design	Intro to Machine Learning	Parallel Computing
Data Structures and Algorithms	Software Development & Operations	Computer Organization
Operating Systems	Real Analysis and Multivariable Calculus	Introduction to Electronics
Linear Algebra & Ordinary Differential Equations	Probability Theory	Logic in Computer Science
Theory of Computation	Computer Networks	

## Positions of Responsibility

- **Senior Web Executive, Techkriti** *July'21 - Apr'22*
  - Worked with the Web team and supervised a team of junior executives to develop and maintain the website of **Techkriti'21**
- **Academic Mentor, Counselling Service** *Oct'21 - Present*
  - Helping juniors in clarifying doubts and strengthen concepts, particularly in Mechanics
  - Conducted Institute level Academic classes for 500+ students, also personally mentored many students

## Extra-Curricular Activities

<b>Technical</b>	<ul style="list-style-type: none"><li>• Participated in <b>Techweek</b>, a week long event with many exciting competitions held by SnT Council, IIT Kanpur</li><li>• Active participation in various <b>Competitive Coding contests</b> held on <b>Codeforces</b> and similar platforms</li></ul>
<b>Cultural</b>	Secured podium ranks in various Hindi literary events organised by <b>Hindi Sahitya Sabha</b> , IITK