

# MANAS GUPTA

Fourth Year Undergraduate · Computer Science and Engineering  
Indian Institute of Technology, Kanpur

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## Education

Year	Degree	Institution	Score
2024	B.Tech, CSE	Indian Institute of Technology, Kanpur	8.7/10.0
2019	CBSE – XII	Mantora Public School, Kanpur (CBSE)	95%
2017	CBSE – X	BCM School, Kanpur (CBSE)	10.0/10.0

## Honors and Awards

- Achieved **Academic Excellence Award** for exceptional academic performance for **two consecutive years**
- Secured an **All India Rank of 1042** in JEE Advanced 2020 among 0.2 million students
- Secured an **All India Rank of 2881** in JEE Main 2020 among 1 million students

## Work Experience

### Quantitative Researcher

May 2023 - July 2023

#### J.P. Morgan and Chase

- Worked on integrating the existing model for swaptions on Profit and Loss (PnL) into bond options
- Researched and analysed the reports of PnL from the pre-existing models maintaining consistency over the time periods
- Performed in-depth analysis and tweaks in risk models pertaining to bond options reducing the residual amount in PnL
- Integrated PnL grid view in the trader application pivoted by scenario, component and region with updates on call for monitoring changes in PnL real-time over the day by running risk model computations on cloud with current market state

### Frontend Product Engineer Intern

May 2022 - April 2023

#### Paradime.io

- Worked on the diverse code base of **Paradime.io** to integrate **Excalidraw** in the web-app
- Implemented collaboration of different users in Excalidraw by using reconciliation algorithms
- Implemented **Annotations** feature in **Paradime's chrome extension** with persistent location
- Worked on **Synq** - a virtual plugin installable along with Looker/Tableau and chat among peers connected to Slack.
- Integrated GoogleSheets API to export large SQL queries as tables in GoogleSheets after Google Oauth

### Lead Developer

May 2022 - Dec 2022

#### Student Placement Office, IIT Kanpur

- Lead developer for the Recruitment Automation Portal leading a team of 6 Junior Web Executives for use by over **2500 students** and **500 companies** in the upcoming placement and internship phases each year
- Developed dynamic pages with routing using NextJS alongside responsive modern UI & Search Engine Optimisation
- Implemented module-based layout with page-level authorization and persistent global state
- Optimized heavy loaded pages by implementing Lazy Loading across the web application

## Key Projects

### StoreIt

CS253 Course Project

#### 🌐 StoreIt

Jan 2022 - May 2022

- Developed a retail software, in a team of 10 students to automate & ease the shopping experience of buyers & sellers
- Used ReactJS framework with MUI library for Frontend with Springboot Java as backend framework
- Software displays all the stores with their products for the buyers to go through and also view their previous orders.
- Implemented a search API for the buyers to search for their required product. Seller can edit the categories and products to be displayed in the store page and also add new categories and products

### JAVA 17 Compiler

CS335 Course Project

#### 🌐 CS335 Compiler

Jan 2022 - May 2022

- Designed a Java 17 compiler in a team of 3 within 4 milestones consisting of different phases of compiler design
- Used Flex++ for lexical analysis and implements LALR(1) grammar in Bison for parsing of raw code into a AST
- Implemented compilation toolchain converting JAVA to x86\_64 from 3AC code using back-patching
- Additional support for Interfaces, Typecasting, Imports, Packages

## Relevant Courses

Data Structures and Algorithms	Software Engineering	Computer Organisation	Fundamentals of Computing
Computer Networks	Compiler Design	Operating Systems	Introduction to Machine Learning
Logic & Probability in CS	Real Analysis	Discrete Mathematic	Linear Algebra and ODEs

## Positions of Responsibility

- **Project Mentor**, ACA, IITK  
Taught the basics of Rust and Web Assembly in Rust to 21 first year students  
May 2022 - July 2022
- **Secretary**, Design and Animation Club, IITK  
July 2021 - Feb 2022