

# Mansi Sharma

Final year, **Production & Industrial Engineering**  
Indian Institute of Technology Delhi

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**Portfolio** | 🌐 Mannxxx | **in** Mansi Sharma

## ACADEMIC QUALIFICATIONS

Year	Degree/Certificate	Institute	Performance
2020 - 2024	B.Tech, Production & Industrial Engineering	Indian Institute of Technology Delhi	7.689/10
2020	Class 12 (CBSE)	NSK High School, Gurgaon	95.8%
2018	Class 10 (CBSE)	PathFinder Global School, Pataudi	9.4/10

## SCHOLASTIC ACHIEVEMENTS

- **Prestigious Exams:** AIR 4963 JEE ADV'20 | KVPY' 20 Scholar | CBSE GMO'20 First stage | School rank: 1st in IMO, 1st in NSO, 2nd in NCO, 11th in NEO | School rank: 3rd and state rank: 75th in International Talent Hunt Olympiad.
- Completed Google Summer of Code 2022 under SymPy and currently mentoring for GSoC'23 for SymPy.
- Completing Hacktoberfest and 24Pull Requests from past 3 years, became official contributor to appwrite and webcrumbs.

## INTERNSHIPS

- 1. Google Summer of Code 2022 (SymPy) and Mentor for 2023 (Python, Sphinx)** *May'22 - Present*
  - Created a Rich Beam Solver and Extended the Continuum Mechanics Module of **Sympy**. Added around 30 methods and enhanced functionality of the 2D Beam and 3D Beam Class.
  - Mentored student developers at GSoC'2023, reviewed and merged thousands of lines of code with the SymPy codebase.
- 2. NM Dev Pvt Ltd (Software Developer)** 🌐 *Repository* *Aug'22-Jan'23*
  - Worked on solving **Dual SOCP** problem using **Primal-Dual Interior Point algorithm**, all within the Java language.
  - Built an existing maven project on NetBeans, debug all the build errors and updated the project with latest dependencies.
  - Generated an HTML plot and data charts using D3 and chart.js library which compared time complexity of various libraries.
- 3. Brainnest (Junior Frontend Developer)** 🌐 *Repository* *Jun'22-July'22*
  - Worked on a basic native WebRTC peer-to-peer Web App implementation, which includes a web client and a signaling server for clients to connect and do signaling for WebRTC, also empowering multimedia communication in online collaboration.

## PROJECTS

- Coinfun: Crypto Paper Trading Exchange** | Abhilash Jindal 🌐 *Repository* *Mar, 2023 - Apr, 2023*
- Designed & launched working website for trading in cryptocurrencies along with P2P portal using python, flask and MySQL
  - Designed the backend of registration portal handling maximum corner cases equipped with an **OTP verification API**.
  - Implemented basic KYC (Know your Customer) feature using **Google-Face Recognition API** to verify user accounts.
  - Used **cctx** package to fetch **real-time** crypto price data and plot candle-stick charts in various timeframes using matplotlib
- Sony-sponsored Project on Novel Multi-modal Recommendation Systems** 🌐 *Repository* *Jan, 2023 - Feb, 2023*
- Created an application that offers some personalized movie recommendations according to your search queries along with their posters and TMDB, which is a popular movie database, movie link to know more about the recommended movies.
- Covid-19 Tracker** | Varun Ramamohan 🌐 *Repository* *Oct, 2021 - Nov, 2021*
- Created an app to track Covid-19 cases on country and global level, also provided real-time COVID-19-related news updates.
  - To enhance user safety, we designed an interface that is user-friendly and easy to navigate, and integrated a feature allowing users to determine their proximity to containment zones by entering their location, all powered by real-time data integration.
- B.Tech project-Track check in Helicopter Main Rotor Blade using image processing** *July, 2023 - Present*
- Developing a non-contact based method that is actually safe and reliable, that measures track (within 20mm) in military helicopters using computer vision and image processing, to ensure the safety and reliability of tracking in military aviation.
  - This project is mandated by the BRD(Base Repair Depot) and defense sector to meet their needs and enhance their capabilities.
- Exigency: Ambulance App** | Rahul Garg 🌐 *Repository* *May, 2023 - Present*
- Created an Android application primarily dedicated to saving lives during emergencies and in life-threatening situations.
  - It streamlines the process of booking an ambulance, using integrated real-time GPS tracking, robust communication protocols, and secure data handling, thereby reducing response times and enhancing the chances of saving lives in medical emergencies.
- BloodBank mobile application** 🌐 *Repository* *July, 2022 - Aug, 2022*
- Worked as a vital member of the technical team at Blood Connect Foundation, actively contributing to the design and ongoing maintenance of the Blood Connect mobile application, ensuring safety for individuals in need of life-saving blood-transfusions.
  - Focused on robust user authentication, advanced data security protocols, real-time location services, and proficient Android app development to facilitate efficient donor and recipient matching while upholding stringent health data privacy standards.

## TECHNICAL SKILLS

- **Programming Languages:** Python, C++, Java, Matlab, Latex, SQL, HTML CSS, Javascript, Node.js, React.js, Markdown
- **Frameworks & Libraries:** Numpy, Pandas, Matplotlib, Seaborn, Pytorch, TensorFlow, OpenCV, Gradle, Kotlin, Docker
- **Software & utilities:** VS Code, Cgywin, GitHub, Docker, Shell, Android Studio, Netbeans, Maven, Ms Office, Google Colab

## COURSES DONE

Data structures and algorithms, OOPs, Operating Systems, Networking Fundamentals, DBMS, Introduction to Git and GitHub, Operations research, Machine learning, Deep Learning, Data Analytics, Introduction to Statistics, Stochastic Modelling, Calculus, Linear algebra and differential equations, Web Programming/Web Design, Mobile App Development, Project Management

## EXTRA CURRICULAR ACTIVITIES

- **Hackathons:** Submitted proposals for Geek-A-Thon and Flipkart GRiD'23 and got accepted among the top 15 projects.