



# Amartya Singh

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[Github](#) | [LinkedIn](#)

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## Education

### Indraprastha Institute of Information Technology

B.Tech (CSSS)

2022 – 2026(/Present)

CGPA: 7.00

(till 4<sup>th</sup> Semester)

### Dhruva Public School, New Delhi

CBSE

2020 – 2022

Percentage:

92.20%

### Sant Atulanand Convent School, Varanasi (UP)

CBSE

2018 – 2020

Percentage:

95.00%

## Skills

<b>Expertise Area</b>	Data Structures and Algorithms, Operating Systems (Linux, x86 Architecture, Windows), Object Oriented Programming, UI Designing, Database Management System (MySQL), Frontend Development (HTML, CSS, and JavaScript), Algorithm Design and Analysis, Full-stack Web-Development.
<b>Programming Language</b>	Python, Java, C, C++, Kotlin, MySQL, JavaScript, HTML, CSS, JavaFX, Bash script.
<b>Tools and Technologies</b>	VSCode, Linux (Arch, Debian), Android Studio, IntelliJ IDEA, Figma, Canva, UIwizard, Blender, LMMS, MySQL Workbench, VMware, WebStorm, Bootstrap, NodeJS, ReactJS, ExpressJS, NextJS, Postman, Zotero, Jetpack Compose, Firestore, Firebase, Tailwind CSS, ns-3, Gem5.
<b>Technical Electives</b>	Data Structures And Algorithms(DSA) , Advanced Programming(AP) , Operating Systems(OS) , Algorithm Design and Analysis(ADA) ,Database Management System(DBMS), Artificial Intelligence (AI), Computer Architecture (CA), Computer Network (CN), Research Methods in Social Science and Design(RMSSD) , Discrete Mathematics(DM) , Introduction to Sociology and Anthropology(ISA), Critical Thinking and Reasoning in Social Science(CTRSS) , Computer Organization (CO) , Introduction to Programming(IP) , Linear Algebra(LA) , Probability and Statistics(PnS) , Convex Optimization(COO) , Econometrics-1 (ECO), Fundamentals of Marketing (FoM), Fundamentals of Finance (FF), Cognition of Motor Movement (CMM) , Full Stack Web-Development(Udemy), Android Development Basics(Google).

## Internship

**Web - Development Intern** ([Vena Energy Pvt. Ltd](#))

(May,24 –July,24)

Guide: Mr. Jayatheertha T ([IT Head](#), [Vena Energy](#))

During my internship at Vena Energy, I developed a few comprehensive web applications using Next.js and Firebase, integrating key projects to streamline their operations. This experience enhanced my skills in web development and deepened my understanding of the renewable energy sector.

**Projects****Stick-Hero Game Clone**

(Oct,23 – Dec,23)

Guide: Mr. Koteswar Rao Jerripothalu

Team Size – 2

A clone of the game Stick Hero, in which the GUI is constructed using the JavaFX platform. It incorporates object-oriented programming and design principles, which help us make different objects used in the game, i.e., heroes, sticks, towers, etc.

**Space Debris - Mass Estimation**

(Jul,24 – Current)

Guide: Mr. Arun Balaji Buduru

Team Size – 6

This research project delves into the realm of orbital debris management, specifically focusing on fragments smaller than 10 cm. Leveraging neural networks, we analyze data acquired through global data and meticulously crafted simulations. Also, by synthesizing insights from a plethora of scientific papers, we not only address the pressing issue of space debris but also to inform future satellite deployment strategies and risk mitigation protocols.

**Memory Management System**

(Nov,23 – Dec,23)

Guide: Mr. Dhruv Kumar

Team Size – 2

The implementation of a custom memory management system (MeMs) using the C programming language. Mems utilizes the system calls, mmap and munmap for memory allocation and deallocation.

**Network on Chip (NoC) Benchmarking**

(Aug,24 – Dec,24)

Guide: Mr. Sujay Deb

Team Size – 2

Developed and analyzed various Network-on-Chip (NoC) configurations, benchmarking their performance across multiple metrics to identify the more efficient design using the gem5 tool. It involved detailed simulations and evaluations to optimize interconnect architectures for improved system scalability and latency.

**Online-Store Website**

(Feb,24 – Apr,24)

Guide: Mr. Mukesh Mohania

Team Size – 1

This is a web based application of an online-pharmacy. It's made using major frameworks such as NodeJs, Bootstrap, ExpressJs, MySQL, etc.

**Online Notes Manager**

(May,24 – Jun,24)

Guide: N/A

Team Size – 1

A Next.js application integrated with Firebase for user authentication and real-time database, styled with the utility-first CSS framework Tailwind CSS for highly customizable designs, and

Material-UI for a set of React components that implement Google's Material Design. Providing a robust, scalable, and visually appealing notes-manager.

## Assembler and Simulator

(Feb,23 - May,23)

Team Size - 4

Guide: Mr. [Sujoy Deb](#)

Converts assembly code to machine code (binary) and executes the machine code based on a predefined ISA, developed in Python.

Note: All the above-mentioned projects are available on my GitHub: [Beingstupid4me](#)

## Position of Responsibilities

- Club - Coordinator of [Cyfuse](#).
- Captain of the college foosball team.
- Event Lead of [EPOCH](#), a comprehensive series of workshops designed to acclimate freshers to hackathons. This pivotal event spanned seven workshops, covering everything from problem recognition to delivering final solutions.
- Event lead of a national-level hackathon (EPOCH - BYLD) as a core organizing member, focusing on AI/ML innovation and collaboration.
- Played a pivotal role as a volunteer in the cultural fest, Odyssey, contributing to multiple clubs and actively supporting their major events.

## Awards and Achievements

- Completed Full-Stack Web-Development Course on Udemy.
- Android-Development Basics (Google Developers forum)
- Scored 96.5 percentile in JEE main.
- School Topper in Ramanujan Science Olympiad (IIT-BHU) in 10<sup>th</sup>.
- Qualified JEE - Advanced 2022.

## Interests and Hobbies

- Passionate about web design, as a form of digital art, with a focus on creating visually captivating interfaces, bringing dynamic and immersive elements to digital experiences.
- Passionate about cycling, an avid reader, and someone who enjoys a game of pool or foosball.
- Enthusiastic about exploring cutting-edge technology and its practical implementation as a techie.

Declaration: The above information is correct to the best of my knowledge.

Amartya Singh

Date: 20<sup>th</sup> Dec, 2024