

# SAMARTH NAGPAL

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## EDUCATION

B.Tech (Production and Industrial Engineering)	2026 (Expected)	Delhi Technological University, New Delhi	6.5
CBSE (Class XII)	2022	D.A.V. Public School, Sreshtha Vihar, Delhi	70.8%
CBSE (Class X)	2020	D.A.V. Public School, Sreshtha Vihar, Delhi	85.6%

## INTERNSHIPS

### Generative AI Intern, Fujitsu Consulting India, Noida

June 2025-August 2025

- Tasked with developing a **GenAI tool for optimising the code review process** for the developer. Built and published a Visual Studio Code extension for AI-powered code assistance and chat, supporting **Python, JavaScript, and TypeScript**.
- Integrated a **custom REST API** for real-time code completions, explanations, and interactive chat. Implemented user configuration, **robust error handling**, and seamless UI integration. Authored comprehensive documentation and release notes for end users.

**Tools used:** TypeScript, Node.js, VS Code API, Webpack, ESLint, REST, HTML/CSS, Git, VSCE, Markdown

### Machine Learning Intern, Suvidha Foundation, Remote

August 2024-September 2024

- Designed a **hybrid LLM-LP model** for optimised resource allocation, decreasing waste by 20% and enhancing coverage in rural areas. Led multi-source **data preprocessing, normalisation, and imputation** to improve dataset reliability by 40%.
- Built interactive dashboards with Matplotlib, Seaborn, and Power BI, providing **real-time metrics, enhancing decision-making** for a 30% wider program reach across India. Outcome: resource distribution efficiency increased by 25%.

**Tools used:** Python, Matplotlib, Seaborn, Power BI, OpenAI API, PuLP, Pandas, Excel, SQL, Git

### Software Engineering Intern, IATSAT, Delhi

August 2023-November 2023

- Revamped the user interface with ReactJS, resulting in a **25% increase in click-through rate (CTR)** and improved user experience. [Link](#).  
**Led a team of 10 junior developers**, fostering collaboration and providing mentorship.

**Tools used:** HTML, CSS, JS, ReactJS

## PROJECTS

### Realtime Voice Communication Platform | [Link](#) | React, Next.js, Node.js, WebRTC, Docker, MongoDB, PostgreSQL

- Engineered a peer-to-peer voice communication system using WebRTC and Socket.io, achieving sub-200ms latency for real-time audio transmission, with integrated MongoDB and PostgreSQL to store call metadata and analytics.
- Designed a responsive UI with React, Next.js, Redux, Material-UI, and Tailwind CSS; containerised the app with Docker and AWS S3/Lambda. Tested to support 50 concurrent users.

### MERN Stack Product Store | [Link](#) | MongoDB, Express.js, React, Node.js

- Built a full-stack product **CRUD app with real-time UI updates** and persistent storage, featuring a React frontend with Chakra UI, dynamic routing, and form validation. Developed **RESTful APIs using Express.js and MongoDB** for seamless data operations and implemented modular code with environment-based configuration for easy deployment.

### Sentiment Analysis Application | [Link](#) | Fast API, NLTK, React

- Crafted an innovative solution that processed up to **1000 entries per CSV file**, optimising system efficiency by streamlining operational workflows with 20% reduced latency. Delivered a user-friendly interface with dynamic visualisations (Pie and Bar charts) using Recharts, **improving data interpretation speed by 30%**.

## COURSES AND CERTIFICATIONS

- Advanced Data Structures & Algorithms in Java (Coding Blocks)
- Frontend Web Development (Dev Town) [Certificate](#)
- AI Bootcamp (Intel) [Certificate](#)

## TECHNICAL SKILLS

Languages	Java, Python, SQL, JavaScript, TypeScript, HTML, CSS, NoSQL
Tools	Git, Docker, VSCode, Scikit-learn, Pandas, Beautiful Soup, Seaborn, Matplotlib, Power BI, Excel
Full Stack	ReactJS, Flask, Fast API, Bootstrap, SQLite, Post Man, NodeJS, Express JS, NextJS, WebRTC
Data and ML	Data Preprocessing (normalisation, imputation, outlier detection), Predictive Modelling, Regression, Clustering, Classification, Machine Learning, Natural Language Processing, Computer Vision, Dashboard and Visualisation Creation, Data Analysis and Cleaning, TensorFlow, OpenCV, NLTK

## POSITIONS OF RESPONSIBILITY

- Secretary**, IEEE DTU
- Organizing Committee**, Deltech MUN
- Logistics Head**, ASME DTU