Kunal Chandra

New Delhi, Delhi

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Experience

Intelligence Fusion & Strategic Operations (IFSO) Special Cell, Delhi Police   1st August 2025-31st August2025
Data Science Intern |Link

- Built **AI-Driven Object Mapping & Dynamic Script Modification** tool to analyze Python GUI scripts, detect widgets, and auto-inject event methods.
- Utilized **AST parsing, regex, JSON handling, and dynamic code generation**, and trained a model to act as an **AI coding assistant** for developers' code files.
- Automated repetitive coding tasks, improving workflow efficiency and showcasing the potential of **AI-driven development automation.**

Technical Skills

Languages: Python, Java, C, Go, JavaScript,, HTML, CSS

Developer Tools: Jupyter Notebook, VS Code, GitHub, Anaconda, Google Colab, Ollama,Docker, Git

Frameworks & Libraries: Pandas, NumPy, Matplotlib, Seaborn, OpenCV, NLTK,Scikit-learn, TensorFlow, Keras, PyTorch, YOLOv8, BYTETrack Tesseract OCR, Flask, Streamlit,Gradio,XGBoost,Node.js,Hugging Face Transformers,MediaPipe,FastAPI

Databases: MongoDB, MySQL, PostgreSQL, SQL

Projects

Intelligent Traffic Signal Control System (SMARTFLOW) | Project | Live

- Developed an AI-driven traffic management system using **YOLOv8** for real-time vehicle detection, **BYTETracker** for robust object tracking, and **React** for the user interface.
- Achieved up to **30% congestion reduction** by implementing **dynamic signal timing** powered by **Reinforcement Learning + LSTM-based decision models.**Integrated **IoT hardware (ESP32 with RFID)** to prioritize emergency vehicles and implemented dynamic signal timing for congestion reduction.

Pravha -AI-Powered Flood Forecasting & Emergency Response System |Project|Live

- Designed a **proactive** AI-driven flood forecasting system that predicts flood severity before it occurs using an **XGBoost** ML model **(86.5% accuracy)** and real-time environmental data.
- **Automated multilingual early-warning & emergency coordination**, delivering alerts in **12 Indian languages**, enabling **95% faster response times**, and reducing expected casualties by **70% (960–1280 lives/year)**.
- **Built a scalable full-stack architecture** using **FastAPI (Python), MongoDB, React+TypeScript, Survam AI, and Docker**, integrating GIS mapping, SOS automation, and real-time monitoring in a production-ready microservice ecosystem.

DSCoin: Educational Blockchain Implementation | Project

- Developed a **Java-based cryptocurrency system** implementing core blockchain concepts such as **proof-of-work mining**, **transaction validation**, and **Merkle trees.**
- Utilized **Java**, **SHA-256 hashing**, data structures (**Queues, Linked lists, Merkle trees**) to simulate mining rewards, transaction flow, and blockchain security

Education

Haridwar University   September2023 – June 2027
Bachelor of Technology (Computer Science and Engineering) |**CGPA :8.37**

Indian Institute of Technology Mandi   August 2025-June 2026
Minor in Artificial Intelligence & Data Science

Sam International School
ClassX:94%|2021   CLASS XII:76.4 |2023

Certifications and Achievements

- Programming in Java (**Elite**) – NPTEL, IIT Kharagpur[Link]   October 2024
- Cleared CodevitaRound2 with **270 rank among 1lakh+** participants[Link]   November 2025
- Oracle Cloud Infrastructure 2025 Certified DevOps Professional[Link]   September 2025
- Oracle Cloud Infrastructure 2025 Certified Data Science Professional [Link]   October 2025
- In Trwizardthon,From **1300+** teams and **5200+** students across **28+ states**, we soared into the **Top 25** Finalists[Link]
- Python for Data Science(**Elite Silver**),IIT Madras[Link]
- Made it to the **Top 10 out of 300+** teams at AI Manthan 2025 Hackathon hosted by IIIT Delhi[Link]