Nakul Jain

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Education

Noida Institute of Engineering and Technology Greater Noida, UP
Bachelor of Technology in Computer Science and Engineering (Artificial Intelligence) *Nov. 22 – Present*
- **CGPA:7.78**

Experience

Intern at SKILL INTERN INDIA Virtual

- **Developed an automated color detection system** utilizing Python and OpenCV to examine images and identify their predominant colors.
- **Created an interactive user interface** enabling users to upload images and receive immediate color analysis, featuring both RGB and HEX values.
- Enhanced the system's **accuracy and efficiency** by employing **K-means clustering and color quantization** methods to improve color recognition in intricate images.

Intern at PW SKILLS Virtual

- **Created a web-based Blood Bank Management System** utilizing HTML, CSS, and Django, which facilitates the effective management of blood donations, inventory, and requests from recipients.
- **Developed a secure and intuitive interface** for donors, recipients, and administrators, allowing them to register, request blood, and monitor donation history effortlessly.
- Established a **strong backend with Django and a PostgreSQL database** to manage real-time updates on blood availability.

Projects

AI-Assisted Medical Image Analysis System

- **Created an AI-driven Medical Image Analysis System** utilizing Flask and TensorFlow, which facilitates the automated detection of pneumonia in chest X-rays with remarkable precision.
- **Crafted an intuitive web interface** that allows healthcare professionals to upload images and obtain immediate diagnostic feedback, enhancing efficiency.
- Incorporated **EfficientNet for deep learning classification** and refined image preprocessing using OpenCV and NumPy to boost performance and accuracy.
- **Deployed a cloud-based solution** to ensure high availability and scalability, enabling access to AI-powered diagnostics from various locations.

Stock Portfolio Heatmap Analyzer

- Developed a Python-based tool using **yFinance, NumPy, and Pandas** to fetch historical stock data and **generate correlation heatmaps for selected tickers.**
- Implemented **custom date range filters and visual analytics with Seaborn/Matplotlib** to help users identify market trends, diversification opportunities, and sectoral dependencies.
- Designed an intuitive **Gradio interface** to allow real-time exploration of stock relationships, enabling data-driven investment analysis with minimal technical input.

Crypto Tax Calculator

- This project helps users track their cryptocurrency trades and automatically calculates capital gains or losses using the **FIFO (First-In-First-Out) method.**
- It fetches **real-time INR prices from the CoinGecko API** to ensure accurate tax reporting based on current or historical market data.
- Users can add, edit, and delete trades, view real-time summaries, and export their tax reports in **CSV or TXT format** through a clean, responsive React-based interface.

Technical Skills

Languages: **Java**, **Python**, C, JavaScript, HTML/CSS, SQL
Developer Tools/Technologies: **Git**, Docker, Google Colab Platform, VS Code, PyCharm, IntelliJ, Node.js, Express.js, React.js, MongoDB
Libraries: **NumPy**, **Pandas**, **Matplotlib**, **TensorFlow**, **SciPy**, **scikit-learn**
Soft Skills: **Team Collaboration**, **Effective Communication**, **Time Management**