

# KUNAL PRATAP SINGH

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## Education

**G.L Bajaj Institute of Technology and Management**

*Bachelor of Technology in Computer Science*

**Nov 2022 – August 2026**

*Greater Noida, Uttar Pradesh*

## Professional Summary

A Computer Science student with a strong foundation in software engineering, machine learning, and full-stack development. Experienced in designing and building scalable, data-intensive applications. Successfully developed award-winning projects, earning top placements in competitive hackathons. Eager to apply technical skills within an engineering team to tackle meaningful challenges and drive technological innovation.

## Experience

**Big Startups Network**

**January 2025 – Present**

*Software Developer Intern*

*Noida, Uttar Pradesh*

- Engineered and deployed scalable backend services for a data-intensive application, improving overall system throughput by **15%** in a GCP environment.
- Developed and documented robust RESTful APIs using FastAPI to serve machine learning models, achieving **99.5%** uptime and handling over **5,000** daily requests.
- Contributed to the full software development lifecycle (SDLC) within an agile framework, enhancing deployment efficiency and reducing production bugs by **20%**.

## Projects

**MediBud AI: Medical Chatbot & Report Analyzer** | *Python, LLMs, LangChain, NLP, Generative AI* **May 2025**

- Architected a sophisticated backend system using an **NLP** pipeline to process and retrieve information from unstructured medical data, improving data accessibility by **40%**.
- Leveraged **Generative AI** and **LangChain** to build a conversational API, resulting in a **50%** reduction in average information retrieval time for users.
- Designed the software to be extendable, allowing for future integration of new data sources and models with minimal architectural changes.

**Zentigrity: AI and Blockchain for Governance** | *TypeScript, Python, Solidity, Next.js, System Design* **April 2025**

- Architected a resilient, large-scale decentralized system featuring a **Python AI agent** and **Solidity** smart contracts to automate civic issue validation.
- Developed a secure and responsive reporting dashboard with **Next.js**, which reduced data retrieval times by **30%** through efficient state management.
- Secured **3rd Prize** among **1400+ registered teams** in the Supernova Hackathon for its innovative system architecture and technical execution.

**DermaScope: Skin Cancer Detection using CNN** | *Python, PyTorch, Flask, CNN, React.js*

**March 2025**

- Engineered a scalable full-stack solution with a Flask backend API to serve a PyTorch CNN model, achieving **93%** classification accuracy on the ISIC dataset.
- Designed the system architecture to handle concurrent user requests efficiently, ensuring API response times below **300ms** for a seamless user experience.
- Awarded '**Best Theme**' prize for innovative application design and social impact among **1000+ teams** at the SGU University Hackathon.

## Technical Skills

**Languages:** Python, Java, C++, JavaScript, TypeScript, SQL, Solidity

**Backend Development:** Node.js, Flask, FastAPI, Spring Boot, REST APIs

**Frontend Development:** React, Next.js, JavaScript, HTML/CSS, Svelte

**AI and Machine Learning:** PyTorch, TensorFlow, Scikit-learn, LLMs, LangChain, NLP (spaCy, NLTK), OpenCV

**Core CS and Systems:** Data Structures, Algorithms, OOP, Design Patterns, System Design, Scalability

**DevOps and Databases:** Docker, Git, GCP, AWS (Familiar), Kubernetes, PostgreSQL, MongoDB