

# Mokesh Nagpal

Software Developer, Fastenal

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## Summary

Fluent coder and curious learner with a strong desire to broaden skills beyond an academic foundation, coupled with confidence in communication and leadership potential.

## Education

Degree	Institute	CGPA (10)	Year
Master of Computer Applications	Birla Institute of Technology, Mesra	8.97	Aug 2024–Present
Bachelor of Computer Applications	Lovely Professional University, Phagwara	9.43	Aug 2021–Jul 2024

## Experience

- **Software Development Engineer, Fastenal:** Jan 2026–Jun 2026. Built and optimized backend services, implemented CI/CD pipelines, and automated inventory workflows improving system reliability and delivery efficiency.
- **Data Science Intern, Ernst & Young (EY):** May 2025–Jul 2025. Progressed from foundational to advanced projects in NLP and generative AI, building 5+ applications involving text classification, prompt engineering, and model finetuning, optimizing inference latency by 85%, and streamlining workflows through automated pipeline design.

## Research & Patents

- **Nagpal, M., & Kaur, R. (2025):** An IoT and Cloud Computing-Based Traffic Management System. Accepted for presentation at the AISTS 2025 Conference, Marwadi University. (To appear in IEEE Xplore).
- **Nagpal, M., & Kaur, R. (2025):** A Real-Time Vehicle Detection-Based IoT Impelled Traffic Management System. Accepted for publication in *Quantum-Enhanced IoT: The Future of Smart and Sustainable Urban Spaces*, Bentham Science Publishers.
- **Smart Pillow (Pat. No. 202311080891; Dec 2023):** IoT/ML pillow that auto-adjusts to user posture.

## Projects

- **AI Doctor “Sanjeevani” (Dec 2025):** Built an AI health assistant using **Flask, MongoDB, FAISS, TabNet, LLM** for symptom-based disease prediction with probability visualization and medical insights.
- **ResumeRecon (Jul 2025):** Engineered an intelligent CV matcher using **LangChain, HuggingFace, FAISS, Streamlit**, supporting bulk uploads, role-specific filtering, and USP extraction.
- **YouTube Doubt Solver (Jun 2025):** Built a question-answering app using **Streamlit, LangChain, HuggingFace**, with multilingual transcript translation and RAG-based retrieval.
- **Indus Valley Script Analysis (Mar 2025):** Performed segmentation and directional pattern analysis on ancient seals using **deep learning** for historical inference.
- **SoilMoisture AI (Sep 2024):** Developed a sensor-based app using **Flask + ML models** for precision agriculture.
- **Climate Change Analysis (Apr 2024):** Analyzed global climate data using **R, ARIMA**.
- **E-commerce Website (Dec 2022):** Dynamic **PHP/MySQL** store.

## Skills

### Power Skills

- Critical Thinking
- Leadership & Teamwork
- Public Speaking
- Problem Solving
- Rational Thinking
- Generalization & Modularity

### Certifications

- Data Analysis with Python (IBM; Dec 2024)
- Hands-on ML with Python (HRDC LPU; Dec 2023)
- Data Structures (GeeksforGeeks; Sep 2023)
- Data Visualization with Tableau (CPE-LPU; Aug 2023)

## Achievements

- Winner, Data Science Hackathon (DSS, BIT Mesra; Sep 2024): 24-hour Data Science competition.
- 1st Position, War of Words (LPU; Sep 2023): Debating & teamwork competition.

### Technical Skills

- **Languages:** Python, R, C, C++, Micro-Python
- **Web Development:** HTML5, CSS3, Flask, PHP, JavaScript
- **Frameworks & Tools:** Tkinter, LangChain, HuggingFace, RAG
- **Databases:** MySQL, Firestore, MongoDB
- **AI/ML:** Machine Learning, Deep Learning, NLP
- **Core CS:** Data Structures & Algorithms

### Volunteer Experience

- **Placement Coordinator, BIT Mesra:** Organized drives and secured student opportunities.
- **Vice President, Hostel 4, LPU:** Directed welfare efforts and organized events.
- **Class Representative, LPU:** Served as class–faculty liaison.
- **SSB Interviewee:** Shortlisted for leadership assessment.

### Co-curricular Activities

- Winner, INCREDIBLE-8 (LPU; Apr 2022): Led sustainability challenge initiative.