Mokesh Nagpal

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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

- **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

- **Kaur, R., Nagpal, M., Grover, P. S., & Thakur, A. (2025):** An IOT and Cloud Computing-Based Traffic Management System. Published in the 2025 Artificial Intelligence and Smart Technologies for Sustainability Conference (AISTS), Rajkot, India. IEEE Xplore. DOI: 10.1109/AISTS66100.2025.11233021.
- **Smart Pillow (Pat. No. 202311080891; Dec 2023):** Designed an IoT-enabled, ML-assisted adaptive pillow that senses user posture and automatically adjusts height and firmness for improved ergonomics and comfort.
- **Smart Container (Pat. No. 202311020732A; Mar 2023):** Built an IoT-enabled automated container capable of accurately measuring quantities of flowable materials (spices, sugar, rice, etc.) using embedded sensors for real-time monitoring.

Projects

- **AI Doctor "Sanjeevani" (Sep 2025):** Built an AI health assistant using **Flask, FAISS, TabNet, LLM** for symptom-based disease prediction with probability visualization and medical insights.
- **ResumeRecon (Aug 2025):** Engineered an intelligent CV matcher using **LangChain, HuggingFace, FAISS, Streamlit**, enabling bulk uploads, role-based filtering, and USP extraction.
- **Indus Valley Script Analysis (Jun 2025):** Performed segmentation and directional pattern inference on ancient seals using **deep learning**-based image analysis.
- **Multilingual Audio & Text Converter (May 2025):** Developed an AI-powered speech–text tool using **LangChain, HuggingFace** for audio repair, clear speech generation, and Hindi–English translation.
- **SoilMoisture AI (Sep 2024):** Built a real-time precision agriculture system using **Flask + ML models** to predict soil moisture from sensor inputs.
- **Climate Change Analysis (Apr 2024):** Analyzed global climate patterns using **R, ARIMA** to study long-term trends and forecast climate variability.

Skills

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

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

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)

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

- 1st Position, War of Words (LPU; Sep 2023): Debating teamwork competition.
- Winner, INCREDIBLE-8 (LPU; Apr 2022): Led sustainability challenge initiative.

Achievements

- Winner, Data Science Hackathon (DSS, BIT Mesra; Sep 2024): 24-hour Data Science competition.
- Gold Medalist - LPU: Outstanding academic excellence with proven contributions to research, innovation, and campus initiatives.