# Mokesh Nagpal

Aspiring Data Scientist

## Summary

A fluent coder and a curious learner with a strong desire to broaden skills beyond an academic foundation, coupled with confident communication and leadership potential.

#### Research & Patents

- Sustainable Elevator (Applied Feb '24): IoT prototype with energy regeneration and a web dashboard.
- Smart Pillow (Pat. No. 202311080891; Dec '23): IoT/ML pillow that auto-adjusts to user posture.
- Smart Container (Pat. No. 202311020732A; Mar '23): IoT solution for automated measurement of flowable materials.
- Smart Room (Pat. No. 202311042366A; Mar '23): IoT energy-saving mechanism based on human detection.

## **Projects**

- Indus Valley Script Analysis (Mar '25): Applied image segmentation and analysis to Indus Valley seals.
- Moisture Detection & Prediction (Sep '24): Built an ML-driven Flask app for NPK and moisture sensors, providing real-time predictions and a user interface.
- Hard-Coded MLP (Aug '24): Implemented a foundational multi-layer perceptron in Python to demonstrate neural network fundamentals.
- Adaptive Traffic Management (Jun '24): Developed congestion-reduction software using deep learning and image processing
  with a Flask admin panel.
- Climate Change Analysis (Apr '24): Performed R-based preprocessing, ARIMA forecasting, and clustering on global climate indicators.
- Death & Wars Visualization (Oct '23): Visualized the COW dataset using R and Tableau to explore correlations between conflicts and fatalities.
- E-commerce Website (Dec '22): Developed a full-stack PHP/MySQL site as part of a college revenue program.
- C Tic-Tac-Toe Game (Aug '22): Created a GUI-based C game featuring single- and multiplayer modes.

#### Education

Degree	Institute	CGPA	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

#### **Skills**

#### **Technical Skills**

- Python, R, C, C++, MicroPython, SQL, PHP, JavaScript
- Flask, Tkinter, HTML5, CSS3
- MySQL, Firebase
- Machine Learning, Deep Learning, Tableau
- Data Structures & Algorithms

#### Certifications

- Data Analysis with Python (IBM; Dec '24)
- Hands-on ML with Python (HRDC LPU; Dec '23)
- Data Structures (GeeksforGeeks; Sep '23)
- Data Visualization with Tableau (CPE-LPU; Aug '23)

# Volunteer Experience

- Placement Coordinator, BIT Mesra: Organized recruitment drives and secured opportunities for students.
- Vice President, Hostel 4 Committee, LPU: Led welfare initiatives and events for residents.
- Class Representative, LPU: Liaised with faculty on academic matters.
- SSB Interviewee: Short-listed for leadership and assessment rounds.

## Power Skills

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

## **Achievements**

- Winner, Data Science Hackathon (DSS, BIT Mesra; Sep '24): A 24-hour data science competition.
- Secured 1st position, War of Words (LPU; Sep '23): Debating & team work competition

# Co-curricular Activities

 Winner, INCREDIBLE-8 (LPU, Apr '22): A sustainable development based competition