SHANKUL PATEL

IIT Roorkee, 247667 | shankul_p@cs.iitr.ac.in | +91 9569770695 | linkedin.com/in/sp2804

About

I am a dedicated and research-oriented first-year PhD scholar in Artificial Intelligence at the Indian Institute of Technology, Roorkee. My work focuses on deep learning, with a particular interest in transformer-based architectures applied to computer vision, natural language processing, and large language models. I am passionate about advancing foundational research and developing scalable AI solutions that bridge vision and language understanding.

Education

Doctor of Philosophy (PhD) 2025 – *Present*
Indian Institute of Technology, Roorkee

Master of Technology (Data Science) 2023 – 2025
Jawaharlal Nehru University, New Delhi

Master of Computer Applications 2021 – 2023
Jawaharlal Nehru University, New Delhi

Bachelor of Computer Applications 2017 – 2020
PPN PG College (CSJM University Kanpur), UP

Intermediate (PCM) 2017
BN Inter College, UP Board

High School 2015
MPHSS, UP Board

Additional Qualifications and Achievements

Recipient of **Vishveshwarya Fellowship** by MeitY

UGC NET with Junior Research Fellowship (JRF) Dec 2024
Computer Science and Applications, *Percentile: 99.9779354*

GATE (DA), *AIR 3876*; **GATE** (CS), *AIR 5590* 2025; 2023

Research Articles

Swati Todi, **Shankul Patel**, Poonam Agarwal. Bi-functional Glucose Sensing-Transmission (Sens-Tra) Sensor for IoT-based Applications (*communicated in **Ad Hoc Networks**, Elsevier Journal*)

Swati Todi, **Shankul Patel**, Poonam Agarwal. Correlation Study of the Received Signal Strength Indicator (RSSI) relative to Glucose Concentration using ESP8266-01 Wi-Fi Module (*communicated*)

Research Interests

Deep Learning and Multimodal Machine Learning
Large Language Models
Natural Language Processing
Computer Vision

Courses and Skills

Information Theory	AI & ML	Python
Optimization	Theory of Computation	PyTorch
Linear Algebra	Algorithms	HuggingFace
Probability	Computer Networks	LaTeX

Projects and Dissertation

Step Counter based on Triboelectric Energy Harvester (TEH) using ESP32 *(MCA Project)*
Multimodal Visual Understanding and Description (*MTech Dissertation*)

Certificates

Deep Learning for Computer Vision, NPTEL (IIT-H), Prof. Vineeth N.B., *Percentage: 67%* Nov 2024