

Prakarsh Goel

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EDUCATION

Bennett University

Bachelor of Technology in Data Science

Greater Noida, UP

2023 – 2027

RESEARCH EXPERIENCE

ScamShield AI: Transformer–RAG Framework for SMS Scam Detection | Prof. Sanchit Tyagi

2026

- Developed a **Transformer–RAG framework** for SMS scam detection, eight-class categorisation, phishing URL scoring, and explainable safety guidance.
- Achieved **96.4% accuracy**, **91.2% macro-F1**, and **97.8% phishing URL F1** using a Dual-Head Shared-Encoder and RAG-based advisory system.

Advanced Forecasting of Groundwater Levels in Italy | Dr. Manoj Kumar

2025

- Analysed groundwater time-series data and implemented **ARIMA**, **Prophet**, **LSTM**, **XGBoost**, and **GARCH** for forecasting.
- Compared models using **RMSE** and **MAE** to identify effective approaches for groundwater management and climate risk analysis.

PROJECTS

FlappyBird RL | Python, PyTorch, Pygame, NumPy, DQN, Reinforcement Learning

2026

- Developed a **Deep Q-Network (DQN)** agent using an **8-feature state representation** and 2-action space.
- Implemented **experience replay**, **mini-batch training**, and **reward optimization** in PyTorch.
- Engineered the Pygame environment with **physics**, **pipe generation**, **collision detection**, and **scoring**.

Virtual Assistant | Python, Speech Recognition, Generative AI, WeatherAPI, AppleScript

2025

- Developed a **voice-controlled Python automation toolkit** supporting weather, application, Bluetooth, and file management operations.
- Integrated **Speech Recognition** and **Text-to-Speech** for hands-free interaction and automated system command execution.
- Implemented **WeatherAPI** and **macOS automation** for real-time weather/AQI reporting and app controls.

EXPERIENCE

Evaratus (formerly Scaler AI Labs)

Oct 2026 – Present

Intern

- Supporting the MTS team in **QA for reinforcement learning (RL)**, validating tasks and flagging edge cases.
- Exploring **RL environments** to understand reward design, state/action spaces, and failure modes.

Climetrix

June 2024 – Present

Freelance (Remote)

- Maintained financial records and managed **accounts payable/receivable** for smooth transaction handling.
- Supported business operations through organized financial tracking and reporting.

Chegg

Feb 2024 – March 2026

Managed Network Expert

- Solved advanced academic problems in **Statistics** and **Probability** with high conceptual accuracy.
- Provided structured and step-by-step solutions to quantitative and analytical queries.

TECHNICAL SKILLS

- Data Science:** Data Analysis, Statistics, Data Visualization, Predictive Modeling, Time Series Forecasting
- Machine Learning:** Reinforcement Learning, DQN, Transformers, RAG, LSTM, XGBoost, Neural Networks
- Programming Languages:** Python, SQL, C++
- Libraries/Tools:** PyTorch, NumPy, Pygame, Matplotlib, SpeechRecognition, pyttsx3, Git