# **Utkarsh Gupta**

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### **PROFILE**

Evolving Data Scientist & AI/ML Engineer passionate about building impactful real-world AI solutions. Experienced in end-to-end pipelines (OCR, NLP, RAG, and DL), with a strong foundation in statistics and cloud-based ML deployment. Adept at combining analytical rigor with scalable engineering solutions.

#### **EDUCATION**

<b>Bachelor of Technology,</b> Sai University ∅	2021 – present   Chennai, India
<b>Intermediate,</b> Vidyagyan Leadership Academy <i>⊗</i> Scored 95.4%.	2020 – 2021   Delhi NCR, India
<b>High School,</b> <i>Vidyagyan Leadership Academy ⊗</i> Scored 97%.	2018 – 2019   Delhi NCR, India

### **COURSES**

Machine Learning   Deep Learning   Time Series Analysis   Financial Modelling with Python	
Probability and Statistics   Data Structures and Algorithms   Data Base Management Systems	
Distributed Computing and Big Data   Computer Organization and Architecture	
Linear Algebra   Numerical Methods   Theory of Computation   Sports Analytics	
Digital Logic Design   Computer Networks	

# **TECHNICAL SKILLS**

**Programming Languages:** Python | R | SQL | C

**Libraries & Frameworks:** Scikit-learn | Keras | PyTorch | TensorFlow | FastAPI | XGBoost | LightGBM

Data Handling & Visualization: Pandas, NumPy | Matplotlib, Seaborn | Excel (advanced)

**Machine Learning & Deep Learning:** Neural Networks | CNNs, RNNs, LSTMs | Transformers | LoRA Fine-Tuning

Natural Language Processing:  $NLP \mid OCR \mid RAG \mid LangChain$ 

**Databases:** MySQL | VectorDB | GraphDB

Tools & Cloud: Git/GitHub | AWS (Amazon Web Services) | Azure | Google Cloud Platform

**APIs and Web Scraping:** REST APIs | BeautifulSoup, Scrapy

## **PROJECTS**

## **Medical Diagnosis Extraction (OCR + NLP)**

Built a system to extract handwritten diagnoses from medical forms and classify into ICD-10 codes using pre-trained OCR and NLP models.

# Webpage Question Answering (RAG System)

Developed a retrieval-augmented generation system using LLMs to answer queries based on website content.

# **Talent Acquisition AI Bot**

Deployed chatbot for interview management using FastAPI and LLaMA model, with dynamic prompts and evaluation scoring.

## **Semantic Textual Similarity (STS)**

Developed NLP pipeline for measuring semantic similarity between sentences, with streamlit demo.

## **Image Recognition System**

Used transfer learning on Keras applications to fine-tune models for image classification tasks.

# **Text Classification with Prefix Tuning**

Applied prefix tuning on LLMs to enhance performance for customized text classification tasks.

#### **ACHIEVEMENTS**

# Nationwide Top 30, Bajaj Finserv-HackRx 5.0 Hackathon

Sep 2024

Led a team to Top 30 Nationwide in HackRx 5.0 Hackathon (Bajaj Finserv) with AI-driven healthcare solution

Best Speaker Award, 2022

K.V. Ramani, Chancellor, Sai University

First Debate Competition

- Awarded for outstanding performance in a debate on the topic: "Should primary education prioritize mother tongue or English?"
- Demonstrated critical thinking, effective communication, and persuasive argumentation skills.
- Debate held on the occasion of Matribhasha Diwas (Mother Tongue Day).

#### **SOFT SKILLS**

Analytical Thinking, Rapid Learning, Team Leadership, Effective Communication, Adaptability, Attention to Detail

#### **DECLARATION**

I Utkarsh Gupta hereby declare that the information shared is provided by me and is correct.

**Utkarsh Gupta**