



# Rishit Jakharia

B.tech in Computer Science  
Indian Institute of Technology, Delhi

+91-6353097102  
rishitjakharia@gmail.com  
LinkedIn Profile

## ACADEMIC DETAILS

• Indian Institute of Technology, Delhi (B.Tech in Computer Science)	CGPA: 8	---
• St.Xavier's High School, Gandhinagar (GSEB)	Percentage: 82	2022
• St.Xavier's High School, Gandhinagar (GSEB)	Percentage: 86.5	2020

## SCHOLASTIC ACHIEVEMENTS

• Merit List Awardee: Stood among the top 7% of academically excelling students at IIT Delhi	2023
• JEE Advanced: All India Rank 76 (OB) out of more than 2,50,000 candidates	2022
• JEE Mains: All India Rank 546 (OB) among 12 lakh candidates registered	2022
• KVPY(SX): All India Rank 801 out of more than 100,000	2022
• Indian Olympiad Qualifiers: Physics (Top 264), Astronomy (Top 1% Gujarat).	2022
• KVPY(SA): All India Rank 248 out of 100,000 candidates	2021

## EXPERIENCE

• Indian Institute of Technology, Gandhinagar   Research Intern under Prof. Nipun Batra	Dec'24
– Developed a D.L. pipeline for sleep apnea detection from Polysomnography, achieving SOTA with 95% accuracy.	
– Leveraged Temporal Convolutions to enhance biosignals analysis to 95% sensitivity and 90% specificity.	
– Applied advanced signal processing techniques to enhance data quality, reducing noise in real-world PSG datasets.	
Received Letter of Recommendation for my work by Professor Nipun Batra	
• eInfochips (An Arrow Company)   Data Science and ML Department	May'24 - Jul'24
– Built a Transformer-based character-level language model with 10 million params, improving predictions by 15%.	
– Enhanced performance by training RNNs, LSTMs, GRUs, and leveraging LangChain with HuggingFace tools.	
– Implemented quantization techniques, reducing model memory usage by 40% and inference time by 25%.	
– Designed a project-specific RAG using Llama-3-8B and FAISS, improving search acc. in real-world applications.	

## PERSONAL PROJECTS

• Automatic Speech Recognition Enhancement Tool   Artificial Intelligence	Sep'24-Oct'24
– Enhanced OpenAI's Whisper, achieving a 20% reduction in Word Error Rate (WER) using vocab. tuning.	
– Implemented local search optimization techniques to significantly improve transcription accuracy of model.	
– Streamlined model performance, enabling better recognition in specialized domains and noisy environments.	
• Latent Space Visualization using VAE and GMMs   Prof. Rohan Paul   Statistical ML	Aug'24-Oct'24
– Built a Variational Auto-Encoder Model with 74% reconstruction score comparable to state-of-the-art.	
– Used Generative Models like VAE to reduce the training dataset size required to train GMMs by 1000%	
– Improved classification accuracy for imbalanced datasets by 15%, showcasing the approach's robustness.	
• Research Paper Summarization with RAG and Transformers   Agentic LLM App	Jun'24-Jul'24
– Automated research paper summarization, achieving 95% accuracy in extracting key insights using LangChain.	
– Used HuggingFace's opensource model by Meta (Llama-3-8b-Instruct-GGUF) for the inference using Llama cpp.	
– The RAG Application uses Chroma db as vector store and Google's MiniLM BERT tokenizer for the tokenization.	

## TECHNICAL SKILLS

Languages: C++, Python, SQL, C, Java | Softwares: Postgres, Jupyter Notebooks, AWS.  
Library & Frameworks: PyTorch, Tensorflow, LangChain, HuggingFace, Ollama, Kaggle (Expert).

## RELEVANT COURSES

• Computer Science and Mathematics: ML, AI, Probability and Stochastic Process, DBMS, DSA, DL.
--

## POSITIONS OF RESPONSIBILITY

• Volunteer National Service Scheme	Apr'22-Present
– Conducted workshops on Advanced electronics for underprivileged students, impacting 200+ participants.	
– Collaborated with local NGOs to distribute supplies, benefiting 500+ economically disadvantaged individuals.	
• Hostel Representative BRCA, Dance Club	Jul'23-Jul'24
– Organized 15+ inter and intra-college events, each drawing an audience of more than 1,000+ attendees.	
– Managed Dance Events in Rendezvous'23 IIT Delhi's cultural fest, with an average footfall of 1,60,000.	

## EXTRACURRICULARS

• Amazon ML Summer School: Got selected post a 2-tier process for Amazon ML Summer School 2024	Jul'24
• Build Hackathon: Built a chat bot and achieved 2nd runner up in Hackathon by Speranza.	May'23
• Vdefyn: Was a part of Institute Dance team that secured 3rd Position in IITB MOODI prelims	Aug'23-Dec'24