Jatin Sharma

Roll No.: 2404101003
Master of Science (Research) in
Computer Science and Engineering
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Education

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
MS (Research) CSE	Indian Institute of Technology, Indore	9.83/10	2024–2026
B.Tech. CSE	University Institute of Technology, HPU, Shimla	9.04/10	2020–2024
Senior Secondary	CBSE Board	94.8%	2020
Secondary	CBSE Board	88.8%	2018

Professional Development

•Google Cloud Facilitator Program *Apr. 2021 – Sep. 2021*
Trainee Remote
– Participated in a comprehensive training program covering Google Cloud technologies.
– Completed hands-on labs and projects in cloud computing, machine learning, and data management.
– Further participated in the "30 Days of Google Cloud" challenge, deepening expertise in cloud services.
– Received recognition for active participation and completion.

Projects

•Optimal File Compressor *Dec. 2023 – Apr. 2024*
Under the guidance of Dr. Balvir Singh Thakur, UIT Shimla GitHub
– Technologies Used: C++ (for logic implementation), Python (for UI, routing, and linkages), LZW Algorithm, Huffman Coding
– Developed a file compression tool that optimally reduces file sizes using LZW and Huffman coding techniques.
– Utilized Python to design a user-friendly interface and manage routing, enabling seamless interaction.

•Sentiment360 – Multimodal and ML-Driven Sentiment Analysis *Oct. 2024 – Dec. 2024*
Under the guidance of Dr. Nagendra Kumar, IIT Indore GitHub
– Technologies Used: Python, TensorFlow, BERT, Scikit-Learn, OpenCV, XGBoost
– Built a versatile sentiment analysis system integrating text and image data, leveraging BERT and CNNs.
– Enhanced accuracy by 18% through multimodal fusion and optimized ML pipelines with TF-IDF and transfer learning.

•SpatioFlow – Spatio-Temporal Forecasting System *Oct. 2024 – Feb. 2025*
Under the guidance of Dr. Nagendra Kumar, IIT Indore Confidential
– Technologies: Python, PyTorch, GNN, TCN, GAT, MLP, Attention, RAG, Embeddings
– Developed a spatio-temporal forecasting model using GAT and TCN for dynamic pattern prediction.
– Enhanced with RAG, MLP, and embeddings for improved contextual accuracy.

Technical Skills

- **Programming**: C/C++, Python (NumPy, Pandas, PyTorch, TensorFlow), Java
- **Web Development**: React, Firebase, jQuery*
- **Machine Learning**: Computer Vision, ML on Graphs, Generative AI, LangChain, NLP, Meta-Learning, Time-Series Analysis, Retrieval-Augmented Generation (RAG)
- **Data Science & Statistics**: Similarity Search (ANN, LSH), High-Dimensional Vector Databases (Faiss, Pinecone), Financial Forecasting, Data Visualization, Probabilistic Modeling
- **Database Systems**: DBMS, SQL, Vector Databases, Information Retrieval (DPR, BM25)
- **Additional Skills**: System Design, Optimization Techniques, Performance Tuning, Linux, Windows

Key Courses Taken

- **Mathematics**: Linear Algebra, Basic Calculus, Discrete Maths, Probability, Statistics
- **Computer Science**: Algorithms, Data Structures, DBMS, Programming Languages, OOP, Operating Systems, Computer Networks, Computer Organization
- **Artificial Intelligence**: Machine Learning, Data Science, AI, Data Warehousing and Data Mining

Achievements

•Successfully Cleared GATE Exam Multiple Times, *2023 – 2024*
Achieved All India Ranks of 535, 831, 1433, and 2425 through dedicated self-preparation and comprehensive study.