Harsh Gupta

Gurugram Haryana | +91 8890817327 | dsharshgupta@gmail.com | www.bswallebhaiya.in |
www.linkedin.com/in/harsh-gupta-605410223

EDUCATION

Indian Institute of Technology Madras   Chennai, Tamil Nadu
Bachelor of Science, Data Science and Applications, CGPA 8.9   2025
Pratap University   Jaipur, Rajasthan
Bachelor of Mathematics, CGPA 6.9   2022

RESEARCH EXPERIENCE

Sudha Gopalakrishnan Brain Centre (IIT Madras)   Chennai, Tamil Nadu
Machine Learning Research Intern   August 2024 – Present
- Trained SOTA models (YOLOV8, U-NET) for brain image segmentation to segment various parts of the brain at different hierarchical levels.
- Worked on Text2SQL RAG system for question answering about the brain data and Neuro Voyager Platform to any new comer on site.
- Fine-tuned Defog-AI and SQLCoder on our internal sites database to enhance query performance and accuracy, ensuring data privacy by keeping the solution in-house.

TEACHING EXPERIENCE

IIT Madras BS Programme   Chennai, Tamil Nadu
Machine Learning Project Mentor and Stats Teaching Assistant   January 2023 – August 2024
- Helped more than 450 students in their kaggle project of Machine Learning which included various tasks (Regression, Classification) using scikit-learn.
- Organized 7-day bootcamp for Machine Learning using Scikit-learn and Streamlit for deploying.
- Helped more than 200 students in their Statistics-2 course of BS programme by taking live sessions on G-meet.

WORK EXPERIENCE

Metagauss (Toronto ,Canada)   WFH
Data Science Intern   December 2023 – April 2024
- Developed a Retrieval-Augmented Generation (RAG) system to address inquiries from recently on boarded employees regarding the hiring process documentation and terms and conditions.
- Utilized various technologies and frameworks including ChromaDB, ChatGPT API, and AWS in project development.

SKILLS

List any skills in order of what most pertains to your field. Skills can be in computer software, laboratory, and technical.
- **Technical:** Python, C++, SQL, BASH, Data Structures.
- **Frameworks:** Flask, Vue, Bootstrap, FastAPI, jinja
- **Libraries:** Scikit-learn, NumPy, Pandas, Pytorch, hugging face, langchain, ChromaDB, Streamlit
- **Database:** ChromaDB, sqlite, MySQL, Postgres, Neo4j

Projects

E-Commerce Customer Segmentation (https://github.com/dsharshgupta/e-commerce-data-machine-learning)
- Achieved 12th place out of 700+ students in a college Kaggle competition, employing a Stacking Classifier as the optimal model.

Library Management System (https://github.com/dsharshgupta/Library-Management-system-flask_app)
- Developed a Flask-based web application enabling users to request e-book issuance, subject to librarian approval.

RAPTOR - RAG (https://github.com/dsharshgupta/RAPTOR-RAG)
- Developed a RAG system using Raptor model for pattern recognition, Gemini for embeddings, and Milvus for vector storage, with a Streamlit-based interface for user queries.