

# Shreyanssh S Shrivastav

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## Summary

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Data Analyst and aspiring Data Scientist with expertise in data preprocessing, visualization, and predictive analytics. Experienced in developing deep learning architectures and large language models (LLMs) using PyTorch and Hugging Face. Passionate about designing scalable AI solutions and extracting actionable insights from complex datasets.

## Projects

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**Fine-Tuning LLaMA 2 (7B Parameters) for Text-to-SQL Generation** *Hugging Face, PyTorch, QLoRA, PEFT*

- Fine-tuned the **LLaMA 2 (7B)** model using a custom Hugging Face dataset to generate SQL queries from natural language questions.
- Employed **AutoTokenizer** and **AutoModelForCausalLM** with **PEFT** for lightweight fine-tuning while preserving pretrained model weights.
- Utilized **QLoRA** for GPU-efficient training and achieved an overall accuracy of **79%**.
- Implemented a **correct-answer evaluation function** to compare model output against expected results and refine response quality.
- Configured output generation using **generation\_config** to maintain token coherence and conversational context.

**Building a GPT Model from Scratch** *PyTorch, Deep Learning*

- Implemented a simplified **GPT architecture** to understand transformer internals and the working of gradient descent algorithms.
- Designed and integrated key modules — **token embeddings, positional encoding, masked multi-head attention, skip connections, and layer normalization**.
- Added feed-forward layers with Softmax activation for improved token selection and non-linear representation learning.

**Anomaly Detection in Credit Card Transactions** *Python, Sklearn, XGBoost, Seaborn*

- Processed 400k+ transactions using Pandas and NumPy for cleaning, normalization, and feature engineering.
- Trained Decision Tree, Random Forest, and XGBoost models; evaluated with accuracy, precision, recall, and F1-score metrics.
- Enhanced model performance via **GridSearchCV**-based hyperparameter optimization.

## Education

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**MBA in Data Science and Analytics** *Manipal University Jaipur*  
CGPA: 7.5/10 Jun 2025

**B.Tech in Computer Science and Engineering** *SRM Institute of Science and Technology*  
Jun 2021

## Technical Skills

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**Languages:** Python, SQL

**Machine Learning:** Decision Tree, Random Forest, XGBoost, Gradient Descent, Supervised/Unsupervised Learning

**Deep Learning:** PyTorch, Transformers, Neural Networks, Hugging Face, PEFT, QLoRA

**Libraries/Tools:** Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn, Tableau, Excel (Power Pivot, VLOOKUP, XLOOKUP)

**Specializations:** LLM Fine-tuning, NLP, Data Visualization, Fraud Detection, Model Optimization