Sahil Chambyal

Samba, J&K, India

✉ sahil.chambyal@outlook.com | 📞 +91- 96826-80018 | 🔗 linkedin.com/in/sahil-chambyal07 | 🐙 github.com/sahilchambyal

EXPERIENCE

SKIPQ | Intern   **Remote, Feb 2024 - July 2024**

- Analyzed over **30,000** transaction records for students and office workers using **DBSCAN** and Hierarchical Clustering, uncovering insights that improved targeted marketing efficiency by **15%**.
- Spearheaded the creation of **RNN** and **LSTM** models that achieved a **90%** accuracy rate in real-time predictions, reducing response times by **30%** and significantly boosting system performance.
- Developed a scalable machine learning pipeline for data preprocessing, model training, and evaluation that cut processing time by **40%** and enhanced overall workflow efficiency by **25%.**

PROJECTS

Neural Networks from Scratch on MNIST database   **Feb 2025**

- Developed a neural network from the ground up to classify handwritten digits using the MNIST dataset of **28x28** grayscale images, without relying on high-level libraries like PyTorch or TensorFlow.
- Built the complete neural net pipeline using only **NumPy**, including forward propagation, backpropagation, weight initialization, and optimization via stochastic gradient descent.
- Achieved **90.09%** accuracy on the MNIST test set after training for **1000** epochs on CPU, demonstrating a deep understanding of neural network internals and mathematical foundations behind deep learning.
- GitHub Link : **github.com/SahilChambyal/Neural_Network_from_scratch_MNIST**

NLP Model to extract articles and analise over 20+ defined parameters   **Mar 2025**

- Built an end-to-end text analysis pipeline that scrapes articles from websites and performs Natural Language Processing (NLP) to extract and analyze **20+** linguistic and sentiment-based metrics for in-depth content evaluation.
- Implemented custom web scrapers using Requests to fetch articles. Utilized NLP libraries like **NLTK** to compute metrics such as **polarity**, **subjectivity**, positive/negative sentiment scores, complex word density, **Fog index**, and more.
- Analyzed **500+ articles** with **95% scraping accuracy** and generated detailed reports on each using 20+ parameters, enabling automated content profiling and sentiment breakdown for SEO and editorial use-cases
- GitHub Link : **github.com/SahilChambyal/NLP_text_analysis_web-scrapping**

CERTIFICATIONS

- **ChatGPT Advanced Data Analysis**   **Vanderbilt University, May 2024**
  Developed advanced data analysis skills using ChatGPT, enhancing capabilities in generative AI and predictive analytics.

- **Generative AI with Large Language Models**   **DeepLearning.AI, Apr 2024**
  Mastered the design and implementation of solutions powered by large language models

SKILLS

Python, Java, Keras, Computer Vision, C++, Supervised Learning, Unsupervised Learning, SQL, Git, OpenCV, Hugging Face, Reinforcement Learning, Deep Learning, Kaggle, Natural Language Processing (NLP), Transformers, Pytorch, Deployment, Machine Learning, Generative AI, LLMs, Cloud, Data Preprocessing, TensorFlow, NLTK, Gensim

EDUCATION

- **Lovely Professional University** | *B. Tech Computer Science and Engineering*   **Phagwara, India**
  Cumulative GPA: 8.2 / 10

- **Sainik School Kapurthala**   **Kapurthala, India**
  Specialization: Science (Physics, Chemistry, Math)