

MRINAL BHAN

+91-6006118448 bhanmrinal@gmail.com
LinkedIn www.mrinalbhan.site GitHub

EDUCATION

International Institute of Information Technology, Raipur

B.Tech in Data Science and Artificial Intelligence

8.55/10

Dec. 2021 – May 2025

Delhi Public School, Jammu

CBSE Class XII

90.2%

June. 2020 – July 2021

EXPERIENCE

Eaglytics Co.

AI Developer Intern

Dubai, UAE

May 2023 – Sept. 2023

- Directed the seamless incorporation of ETL pipelines with AI models **PaLM 2, Claude V1** on Google Cloud's BigQuery, boosting data insights by **50%** via advanced NLP and data engineering solutions
- Developed a **GPT-4 & Claude API** powered chat-bot that streamlines data access (**40% increase**) and integration (**70% boost**), enabling autonomous data interpretation within an extension in Slack

Tech Stack: LLMs, LangChain, Data Engineering (Fast API, Selenium, SQL, Apache Airflow), Google Cloud Console

PROJECTS

LLMs See Further: Computing Approaches to Extend Context Window in LLMs | LLMs, NLP

- Aim to push the boundaries of LLM's capabilities by enabling them to handle tasks requiring broader context due to their limited context window size (**2k-16k tokens**)
- Implemented & compared context size extension methods (**Self-Extend, HMT, FLASHBACK**) to improve long-range dependency capture in LLMs.

QueryMind: AI-Enhanced Database Chatbot | LangChain, Groq, OpenAI, Streamlit, SQL DB

- Engineered an AI ChatBot leveraging **LangChain** and **Groq/OpenAI**, facilitating natural language interaction with **SQL** databases
- Utilized **Text-to-SQL** with **SQL-Create-Context** Dataset for enhanced query generation
- Constructed a private interface using Python and Streamlit, incorporating database connectivity and persistent chat history

Neural LOLgorithm - Deep Learning for Multi-Modal Comedy Data | PyTorch, NLP, REST API

- Proposed a **10-point** humor quotient scale using Deep Learning, based on laughter's Pitch and Intensity measures
- Curated a multimodal data set comprising of audio, video, textual features extracted from Netflix, YouTube etc. using libraries such as **Whisper, Librosa, OpenPose, RoBERTa** etc
- Optimized performance via response caching and reduced API calls, achieving Quadratic Weighted Kappa score of **81.3%**

Automated Reddit Data Pipeline using Apache Airflow | Python, Apache Airflow, AWS

- Executed a custom ETL pipeline using **Airflow** on Reddit API, integrated with **AWS EC2** for task scheduling using **DAGs**
- Extracted, transformed, and loaded data from Reddit API into an **AWS S3** bucket, ensuring efficient data processing & storage

PUBLICATIONS

Real-Time Artistic Transformations via Neural Style Transfer | PyTorch, OpenCV

IEEE TENSYP, September 2024

- Implemented **MSG-Net** for live HD video streams, processing at **10 FPS** with **20-25 ms** latency, achieving **90.44%** style-transfer accuracy, demonstrating strong content preservation with low MSE (**0.0037**) and high image quality indicated by PSNR scores of **40-45 dB**

SKILLS

Languages: Python, C/C++, SQL, GraphQL, C#, R

Frameworks: Keras, Tensorflow, Scikit-Learn, Transformers, OpenCV, PyTorch, Django, Hadoop, Apache Spark, Airflow

Developer Tools: Linux, Git/GitHub, Visual Studio, Google Cloud Console, Hugging Face, Microsoft Azure, Power-BI, AWS, Zapier

Soft Skills: Articulate, Strategic Resolutions, Analytical Thinker, Great Communication & Collaborative skills

ACHIEVEMENTS

- Microsoft Certified:** Azure AI Engineer Associate **AI-102**
- Selected for **Amazon ML Summer School 2024** among 85,000 candidates
- Solved over **300+** DSA questions over several platforms : **LeetCode, CodeForces**
- Certifications:** Coursera (*Google Analytics*), Great Learning (*Data Pre-Processing*), The Construct (*ROS*), NPTEL (*NLP*)
- Vice - Secretary:** Capriccio - Music Society, **Captain:** Basketball Team, **Core Member:** AI/ML Club,