# Anubhav Singh Pathania

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## Education

**Thapar Institute of Engineering & Technology**, Master of Computer Applications                Aug 2024 – Present

**Guru Gobind Singh Indraprastha University**, Bachelors of Computer Applications              Sept 2020 – Aug 2023

## Experience

**Data Science Intern**, GeeksforGeeks – Remote, India                Jun 2025 – Present

- Engineered Python-based data pipelines using Pandas/NumPy for efficient cleaning, transformation, and integration of structured and unstructured datasets.
- Enhanced ML models (Logistic Regression, Random Forest, XGBoost) through feature engineering, boosting accuracy by 12% and cutting inference time by 20%.
- Created data visualizations using Matplotlib/Seaborn to present insights clearly.
- Collaborated in deploying LangChain-powered LLM applications with real-time retrieval for enhanced user experience.

**Front-End Developer Intern**, IRCTC – New Delhi, India                Jul 2022 – Sept 2022

- Developed and maintained responsive web interfaces using HTML, CSS, and Angular, reducing page load time by 25% and increasing user engagement metrics by 15%.
- Integrated and managed database operations to support dynamic content and enhance data accessibility.
- Collaborated with the tourism department to understand requirements and deliver user-focused front-end solutions.

## Projects

**ChatMate |** Python, MySQL, SQLAlchemy, Langchain, Pinecone                github.com/ChatMate

- Developed a chatbot application using Python, MySQL, and SQLAlchemy for smooth, real-time conversations.
- Integrated authentication, document upload, and retrieval features, reducing query time by 35%.
- Optimized backend queries to cut execution time by 40% and handle 2x more requests without latency.

**Sentiment Analysis on HMPV |** Numpy, Pandas, Matplotlib, Seaborn, NLTK, Keras                github.com/HMPV

- Built an end-to-end sentiment and emotion analysis pipeline for HMPV-related data using Python, NLP, and hybrid ML/DL approaches.
- Deployed and integrated an ensemble LightGBM model combining multiple algorithms to boost classification accuracy.
- Implemented Streamlit dashboards for sentiment and model insights.

**Sign2Text |** Python, Numpy, Tensorflow, OpenCV, Streamlit, ML, NLP                github.com/Sign2Text

- Built a real-time bi-directional system enabling speech to Indian Sign Language (ISL) translation for accessibility.
- Achieved 90+ accuracy using CNNs for gesture recognition and NLP for speech-to-text processing.
- Implemented a GUI supporting real-time camera/audio input and offline mode using Tkinter/Streamlit.

## Skills

**Programming Languages:** C++, Python
**CS Fundamentals** : Data Structures & Algorithms, OOPS, Operating Systems, Computer Networks, DBMS, SE
**Core Competencies:** Machine Learning, Deep Learning, Natural Language Processing, Artificial Intelligence.
**Libraries:** Numpy, Pandas, Matplotlib, Tensorflow, Scikit-learn, Pytorch, Streamlit.
**Developer Tools:** VS Code, GitHub, Google Colab, Jupyter.
**Soft Skills:** Communication & Presentation, Critical Thinking, Leadership, Decision Making, Problem Solving.