

# Abhishek Kumar

Email: [abhi.kumar.3515@gmail.com](mailto:abhi.kumar.3515@gmail.com) | Mobile: 9817035600 | [LinkedIn](#) | [Github](#) | Address: Una, Himachal Pradesh

## Professional Summary

Machine Learning Enthusiast with hands-on experience in building scalable ML pipelines, deploying models, and leveraging tools like DVC and MLflow to streamline workflows. Proficient in Python, TensorFlow, and scikit-learn, with a passion for tackling data-driven challenges and optimizing AI solutions for real-world impact.

## Education

Master's in Computer Application | P.G College Dharamshala, Himachal Pradesh (2022–2024)

Bachelors of Science in Computer Science | P.G College Una, Himachal Pradesh (2019–2022)

## Skills

**Programming Languages:** Python, SQL

**Machine Learning:** Data Preprocessing, EDA, Model Training & Evaluation, Neural Networks (CNN), Generative AI (LLMs) NLP, MLOps

**Frameworks & Libraries:** TensorFlow, Keras, Scikit-learn, NLTK, Pandas, NumPy, Flask, Streamlit

**Tools:** DVC, MLflow, Flask, LangChain, Git

**Data Management:** Feature Engineering, Dataset Versioning (DVC)

## Work Experience

**Machine Learning Intern | Solitaire Infosys**

*April 2024 – September 2024 | Mohali, Punjab*

- Implemented scalable machine learning models using Python, scikit-learn, improving prediction accuracy by 12%.
- Designed data preprocessing pipelines to handle missing values, outliers, and feature engineering. Reduced preprocessing time by 20% through optimized data pipelines.

**Machine Learning Intern | Yhills**

*March 2024 – April 2024 | Delhi, India*

- Built a content-based movie recommendation system using collaborative filtering and machine learning algorithms.
- Processed and analyzed datasets using Python, pandas, and scikit-learn, integrating APIs to gather movie data.

**Ai/ML Intern | Brainwave Matrix Solutions**

*March 2025 – April 2025 | Noida, Uttar Pradesh*

- Built and deployed ML models for real-world projects including **Student Performance Prediction** and **Fake News Detection** using Python and Scikit-learn.
- Performed end-to-end data handling: cleaning, preprocessing, and feature engineering to prepare datasets for training.
- Applied NLP and LLM techniques for text classification and content analysis tasks.
- Gained hands-on experience in deploying models to production and integrating them into applications

## Projects

**Cold Email Generator** | [Live](#) | [GitHub](#)

- Technologies:** Python, Generative AI, LangChain, Streamlit, Groq Cloud API, ChromaDB, Pandas
- Designed a generative AI application to automate personalized cold email generation for job applications.
- Integrated LangChain's WebBaseLoader for scraping job links and Groq Cloud API for extracting job requirements and skills.
- Implemented a vector database (ChromaDB) to retrieve relevant portfolio links, increasing workflow efficiency by 80%.

### Data Pipeline with DVC and MLflow for Machine Learning | [DagsHub](#)

- **Technologies:** Python, DVC, MLflow, Scikit-learn, Random Forest
- Built an end-to-end machine learning pipeline for training a Random Forest Classifier on the Pima Indians Diabetes Dataset.
- Leveraged DVC for dataset versioning, pipeline reproducibility, and remote storage.
- Used MLflow to track experiment metrics, hyperparameters, and artifacts for effective model comparisons.

### Twitter Sentiment Analysis | [Live](#) | [GitHub](#)

- **Technologies:** Streamlit, Scikit-learn, NLTK, TF-IDF, Pandas, NumPy, Kaggle Sentiment 140 dataset
- Developed a sentiment analysis model using logistic regression, achieving 70% test accuracy.
- Preprocessed tweets with stemming, stopword removal, and TF-IDF vectorization for feature extraction.
- Deployed an interactive Streamlit web app for real-time sentiment classification of tweets.

### Fruit Classification | [GitHub](#)

- **Technologies:** Python, TensorFlow/Keras, Flask, Streamlit
- Designed and implemented a CNN to classify fruits (apple, banana, grape, mango, strawberry) with 85% accuracy.
- Applied preprocessing techniques (resizing, normalization) for optimized model training.
- Deployed a web-based Flask application enabling users to upload images for real-time fruit classification.

## Certifications

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**Oracle Cloud Infrastructure 2024:** Generative AI Professional | Issued: **Jan 2024** | [View Certificate](#)

**OpenCV:** Free TensorFlow Keras Bootcamp | Issued: **Nov 2023** | [View Certificate](#)

**freeCodeCamp:** Machine Learning with Python | Issued: **Apr 2025** | [View Certificate](#)

**Udemy:** Complete Data Science, Machine Learning, DL, NLP Bootcamp by Krish Naik : Pursuing

**Udemy:** Complete MLOps Bootcamp With 10+ End To End ML Projects by Krish Naik : Pursuing