

Rutvik Prajapati

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Education

Dwarkadas Jivanlal Sanghvi College of Engineering, B.Tech in Artificial Intelligence and Machine Learning Sept 2023 – May 2027

- SGPA: 9.24/10

Projects

Industrial Project: Fortis Healthcare Data Analytics | Python, Machine Learning

- Collaborated with Fortis Hospital to develop an AI-driven system for patient data analysis and outcome prediction.
- Applied machine learning models to identify critical health patterns and optimize clinical decision-making.
- Enhanced diagnostic accuracy and reduced manual analysis time through automated insights and data visualization.

Skin Cancer Detection and Classification | Python, TensorFlow, CNN, U-Net, ResNet50, Transfer Learning | [Link](#)

- Built a deep learning model for binary and multiclass classification on augmented data of skin lesions using dermoscopic images.
- Applied U-Net for lesion segmentation as a preprocessing step to enhance feature extraction.
- Implemented a custom CNN, transfer learning with ResNet50 and VIT for performance comparison.

Quora Question Pairs | Python, Transformer, NLP, TensorFlow, Keras, Gensim | [Link](#)

- Built a pipeline to detect semantically similar questions using 400k+ Quora pairs.
- Applied NLP pre-processing, feature engineering, and vectorization (BOW, TF-IDF, Word2Vec).
- Trained and compared ML models (Random Forest, XGBoost), DL models (LSTM with shared embedding) and Transformers (BERT Transformer).

Movie Recommendation System | Python, EDA, NLP | [Link](#)

- Built a content-based movie recommendation system using TMDB 5000 Movies and Credits datasets.
- Designed features from genres, cast, crew, keywords, and overviews using NLP techniques.
- Data were cleaned and transformed, stemming applied, and stopwords removed.
- Calculated movie similarity using TF-IDF to recommend the top similar movies.

Mobile Sales Dashboard | Power BI, DAX | [Link](#)

- Built an interactive Power BI dashboard to analyze mobile sales across Indian cities.
- Visualized brand performance, top models, payment methods, and customer ratings using dynamic filters and maps.
- DAX for KPIs (sales, quantity, average transaction) and trend analysis to support business insights.

Technical Skills

Programming Languages: Python, C

Libraries & Frameworks: TensorFlow, Keras, NLTK, Hugging Face Transformers, LangChain, RAG

Machine Learning & Deep Learning: EDA, Supervised/Unsupervised Learning, Neural Networks, U-Net, Transfer Learning, LSTM, GRU, Data Augmentation

Databases: MySQL

Tools & Platforms: Google Colab, Jupyter Notebook, VS Code, Power BI

Version Control: Git, GitHub

Achievements

- Secured 1143rd rank out of 7,107 teams in the Amazon ML Challenge 2025 with an overall score of 49.99.
- Shortlisted in the Top 50 teams for the Smart India Hackathon 2025 (Internal Round).

Extra Curriculum

- Attended a machine learning workshop conducted by Synapse.
- Completed the Generative AI course organized by the Google Developer Group (GDG).
- Completed the Summer of Analysis course offered by IIT Guwahati.