

# Prasanna Shakya

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An Aspiring Data Science and AI/ML Enthusiast with a passion for solving problems using Python and data-driven insights.

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## Projects

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### Digital Financial Advisor System [\[GitHub\]](#)

*Tech Stack: Django, SQL, React JS, Random Forest Regressor, REST APIs*

- Developed a web-based fintech platform that provides personalized investment recommendations based on a user risk profile derived from inputs such as age, financial knowledge, goals, investment horizon and risk tolerance.
- Integrated a trained Random Forest Regressor to predict optimal asset allocations (Stocks, FDs, SIPs, Bonds, Commodities, etc.).
- Developed a responsive React dashboard with dynamic pie-chart portfolio breakdowns and allocation summaries to make investment planning easier to understand and accessible for users in Nepal.

### SignTales: LSTM-Based Sign Language Storyteller [\[GitHub\]](#)

*Tech Stack: Python, FastAPI, OpenCV, NLP, React JS, LSTM*

- Built a FastAPI backend and a React JS frontend to render animations, providing an accessible storytelling tool for hearing-impaired children.
- Developed a generative Seq2Seq BiLSTM architecture to translate English text into continuous temporal pose sequences for sign language animation.
- Developed a rule-based SpaCy pipeline for ASL gloss generation and utilized MediaPipe Holistic to extract and normalize 3D skeletal landmarks from custom video datasets.

### Emotional Intelligence Prediction [\[GitHub\]](#)

*Tech Stack: Python, TensorFlow, OpenCV, CNN*

- Designed and trained a CNN model to perform facial emotion classification from human face images, enabling emotion-aware insights.
- Built an image pipeline with preprocessing and real-time data augmentation to improve model robustness.
- Integrated the trained model with OpenCV for real-time emotion recognition from video streams, laying groundwork for interactive user-facing systems.

### Diet Recommendation System [\[GitHub\]](#)

*Tech Stack: Python, Flask, Pandas, Scikit-learn, Seaborn, K-Means*

- Built a Flask-based web app that suggests personalized diet plans from user lifestyle and diet inputs.
  - Used K-Means clustering to group users with similar habits, with data cleaning and feature scaling in Pandas and Scikit-learn for better clustering.
  - Created clear Seaborn visualizations of clusters and patterns to explain recommendations and highlight unsupervised learning in health-tech domain.
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## Education

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**Himalaya College of Engineering** | Bachelor's in Computer Engineering  
Tribhuvan University, Institute of Engineering (IOE)  
Graduation: 2026 | Chyasal, Lalitpur

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## Skills

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- **Programming Languages** – Python, SQL
- **Libraries and Frameworks** – Django, NumPy, Pandas, Matplotlib, Seaborn, OpenCV, TensorFlow
- **Tools and Platforms** – Git, GitHub, Figma