

Esha Pandey

✉ pandey.eshal75@gmail.com

☎ 977 9863336

🌐 esha-pandey-73aa9a255

🔗 Esha420

WORK EXPERIENCE

eSewa Ltd

AI/ML Intern

April 15 2025 - July 17 2025

- Designed and developed a semantic search engine leveraging NLP techniques and vector databases to return relevant search results
- Implemented keyword-based search functionality using Elasticsearch, enabling fast and accurate retrieval of relevant results from structured and unstructured data.
- Developed semantic search capabilities by integrating Milvus (vector database) to store and query dense vector embeddings generated from NLP models, allowing the engine to understand the meaning behind queries and return contextually relevant results.
- Built scalable and modular backend APIs using FastAPI, organizing key components such as admin controls, query processing, data ingestion, and logging for maintainability.
- Containerized all services using Docker and managed multi-service orchestration with docker-compose, ensuring consistent environments and smooth communication between backend, frontend, and NGINX proxy servers.

LIS Nepal

DevOps Intern

March 25, 2024 - September 24, 2024

- Researched on infrastructure technology for containerization of Elasticsearch, Logstash and Kibana using Docker.
- Troubleshoot issues, prioritized incident and made sure of validation of Kibana dashboard to run successfully.
- Created ansible, terraform and backup scripts for automation of kubernetes cluster.

PROJECTS

SMS/Mail Spam Classifier

- Built an interactive web application to detect and classify SMS messages as Spam or Not Spam using machine learning.
- Applied TF-IDF vectorization for text feature extraction from raw messages.
- Trained and evaluated multiple models including Multinomial Naive Bayes and an ensemble Voting Classifier to improve prediction accuracy.
- Performed text preprocessing using NLTK, and handled data manipulation with Pandas.

Restaurant Rating Predictor – AI-Powered Review Estimator

- Built an intelligent system to predict restaurant ratings based on operational features like cuisine, location, and price using supervised machine learning techniques.
- Trained and evaluated multiple models (Linear Regression, Random Forest, Neural Networks) on a labeled restaurant dataset to predict customer ratings.
- Extracted and transformed key restaurant attributes (cuisine, location, price range, service options) into meaningful features for model input enabling feature engineering.

SKILLS

- Programming Languages: Python, SQL, Bash
- Machine Learning & AI: Scikit-learn, Model Evaluation, Feature Engineering, Data Preprocessing
- Natural Language Processing (NLP): Sentence Transformers, Query Parsing, Semantic Search, Text Embeddings
- Streaming & Real-Time Processing: Apache Kafka, Real-Time Data Ingestion, Logstash
- Cloud & DevOps: AWS, Docker, Git, Linux