<SAAHIL KATARIA>

Kolkata, West Bengal, India

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Motivated and detail-oriented Machine Learning Engineer with a robust foundation in developing and deploying cutting-edge machine learning models, including experiment tracking. Possesses knowledge in Natural Language Processing (NLP), Large Language Models (LLM) and Deep Learning (DL).

PROJECTS

Torch Ensemble-Based Microscopic Fungi Classification

Built a PyTorch K-fold ensemble model for microscopic fungi classification using custom CNN architecture, data augmentation, and stratified cross-validation.

Deployed the model as an API using FastAPI, allowing users to upload images and receive predictions.

Abalone Age Estimation using LGBM and PostgreSQL

Developed a web-based application for abalone age estimation using a pre-trained LightGBM model (Optuna for HP tuning) . Integrated FastAPI, PostgreSQL for storing predictions, Jinja2 templates for web pages, and Evidently.ai for data drift monitoring.

The app allows users to input features and receive predictions with stored results for future review.

Advanced DeBERTa-Powered Language Identifier with Gradio Interface

Developed a robust language identification system using a fine-tuned pre-trained DeBERTa model. Integrated Gradio for a user-friendly web interface that allows users to input text and receive language predictions.

EDUCATION

BTech in Computer Science & Engineering (Data Science)
MCKV Institute of Engineering
2020 - 2024

Higher Secondary Examination
Apeejay School Park Street
2020

Secondary Examination
Don Bosco Liluah
2018

SKILLS & PROFICIENCIES

- Machine learning algorithms
- Deep learning frameworks
- Natural language processing (NLP)
- Data analysis and visualization
- Hyperparameter Tuning (Optuna)
- TensorFlow and PyTorch
- Cloud computing (AWS-SAAC02 Certified)
- Experiment Tracking (MlFlow / W&B)
- Model deployment
- Feature engineering
- Time series analysis
- Computer vision
- SQL and NoSQL databases
- Git version control and Docker (Basic)
- Team collaboration and communication

</MACHINE LEARNING ENGINEER>