Goteti Sai Abhinav

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Education

The LNM Institute of Information Technology, Jaipur, Rajasthan 2022 - 2026
Bachelor of Technology in Communication and Computer Engineering

Skills

Frameworks/Libraries: PyTorch , Numpy, Pandas, Scikit-learn, Flask, Git

Concepts: Linear Algebra, Probability, Statistics, Machine Learning, Deep Learning

Projects

Audio Image classification using Hybrid Quantum-Classical Neural Network| *project link*

Academic Group Project | *Pytorch, Qiskit , CNN, MLP, Auto Encoders*

- Developed a hybrid classical-quantum neural network for classification of 2 lung-related diseases (COPD,Pneumonia) against Healthy using lung sound signals.
- **My contribution:** Addressed class imbalance problem, where COPD was the dominating class, using MLP-based Variational Auto Encoder.
- **Architecture:** Encoder (3 dense layers) , 2D latent space, Decoder(2 dense layers), output layer
- Generated high-quality and highly similar synthetic samples for the Pneumonia with cross-correlation 0.70
- Achieved F1-score: 0.9372, recall: 0.918, precision: 0.9173 on COPD class and f1-score: 0.893 on healthy and pneumonia with overall accuracy 90.5 %

California House Price Predictor Application | *project link* | Group size: 1

Python, Scikit-learn, Pandas, Flask, Matplotlib, Seaborn, Pickle, Git, Render(PaaS)

- Pipelined the preprocessing stage using Scikit-learn's ColumnTransformer to apply feature-specific scaling (StandardScaler, Log Transformation) based on statistical analysis of distributions.
- Trained a SGDRegressor model using a custom mini-batch training loop with partial_fit.
- Achieved an R^2 score of 0.62, and analyzed residual plots to validate linear regression assumptions.
- Developed a web application with Flask and HTML, allowing users to input feature values and receive real-time price predictions from the serialized (pickle) model.
- Containerized the application using Docker and published the image to Docker Hub.

Training

- Summer School 2025 on Deep Learning | IIITDM Jabalpur
  learnings: Neural Networks and their Optimization, Generative models (GAN, VAE, Diffusion Model), Explainable AI (LIME, SHAP)

Achievements

- Qualified GATE 2025 with All India Rank 2472 in Data Science and Artificial Intelligence stream. ***(score_card)***
- Achieved Certificate of Excellence in Summer School 2025 on Deep Learning organized by IIITDM Jabalpur. ***(certificate)***