Thilak R

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Profile

Software engineering student proficient in Python, PHP, and ML, with expertise in AI and web development. Built impactful projects and contributed open-source ML projects. Recognized for analytical skills and innovation.

Education

B.E. in Computer Science and Artificial Intelligence 2022 – 2026 | Mysore
Visvesvaraya Technological University
Current CGPA : 8.8.

PUC 2020 – 2022 | Hunsur
Pre University (PU) Education Board, Government of Karnataka
Achieved 93%.

SSLC , KSEEB 2019 – 2020 | Hunsur
Achieved 92%.

Skills

Technical Skills:
- **Machine Learning** : Pytorch, Tensorflow, Sklearn.
- **EDA:** Pandas, NumPy, Matplotlib, Seaborn.
- **Programming Launguages** : Python, Java, PHP, C.
- **Web Frameworks** : Flask.
- **Database Management** : MongoDB, MySQL.
- **Data Analytics Tool** : PowerBI, Excel, EDA
- **Version control** : Git.

Projects

Explainable Ensemble Deep Learning Framework for Glaucoma Detection Using Grad-CAM and SHAP
Early Detection System for Eye Health Monitoring.
- **Models Used:** Implemented an ensemble of **ResNet, DenseNet, EfficientNet, MobileNet, and Inception** for robust classification.
- **Explainability Techniques:** Utilized **Grad-CAM** for visualizing model attention and **SHAP** for feature importance analysis.
- **Feature Representation:** Applied **t-SNE** for high-dimensional feature visualization and clustering analysis.
- Achieved a performance accuracy of **99%** after extensive testing and tuning.
- **Technologies:** Python, PyTorch, OpenCV, CUDA.

Brain Tumor Detection
Medical Imaging Analysis for Early Brain Tumor Detection.
- Leveraged transfer learning with **ResNet-50** to enhance model accuracy while reducing training time for brain tumor detection from MRI scans.
- Utilized a dataset of medical images to train the model, achieving an accuracy of over **99**%.
- Implemented preprocessing techniques like normalization, augmentation, and segmentation for enhanced image clarity.
- Created a user-friendly interface for doctors and medical professionals to input images and receive diagnostic results.
- **Technologies**: Python, TensorFlow, OpenCV, Flask.

Courses

MLOps with Vertex AI
Coursera

Python And Django Framework And HTML 5 Stack Complete Course
Udemy

Build a User Web App from Scratch with Vanilla PHP 8+
Udemy

Languages

English, Kannada, Marathi, Hindi.