Tanvir Ahmed Palok

GitHub

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TANVIR AHMED PALOK

Mohakhali Wireless, Dhaka

SKILLS

- Java
- Python
- HTML, CSS, Javascript
- React.js
- Machine Learning
- Deep Learning
- Image Processing
- git

CERTIFICATES

- Data Science
- Machine Learning
- Deep Learning using Keras, Tensorflow

LANGUAGES

- Bangla
- English

EDUCATION

BRAC University
BSc in Computer Science | 2019 - 2023 | CGPA:3.49

PROJECTS (WEB DEVELOPMENT)

Social Media Webpage 🌐

- Used Material UI 5 for building amazing MUI components.
- Created my own themes and components.
- Used customize styles (Inner styles, styled components)

AI Summarizer 🌐

- Creates summary from an URL.
- Different functionality like copy to clipboard, browser history storage.
- Used OpenAI's GPT model to produce response.
- React, Tailwind CSS, integration of Redux Toolkit query

E-Commerce Website 🌐

- Created frontend part using react, styled components.
- Currently working on the backend learning Node to connect it with the frontend part.

EXPERIENCE 🔗

Medical Image Reader Powered by Artificial Intelligence | **THESIS** | MAY 2022 - SEPTEMBER 2023 | **BRAC University**

- Detected 13 diseases among 18 classes of different types of Medical Images(X-ray, MRI, CT scan) with 94-96% accuracy .
- Used Deep learning, Image Processing, Transfer Learning, Data augmentation, Hyperparameter tuning, Ensemble learning.
- Using some Data Augmentation technique and Image Processing implemented our own Data Processing technique which have gained a better overall accuracy, reduced overfitting and gained a outstanding accuracy of 94.44% from 0% in the beginning on a class which has only 84 training sample, All the models have almost classified this class with an accuracy of (80-94.44)%.
- Implemented our own Ensemble Learning technique which gain better accuracy then other Ensemble Learning technique.

PROJECTS (DATA SCIENCE)

Disease Detection
- Dataset contains of different types of symptoms.
- Tried to predict 42 diseases using different types of symptoms.
- Used data preprocessing to avoid irrelevant data.
- Applied different machine learning models like Logistic Regression, Decision Tree Classifier, K-nearest Neighbor Classifier, Gaussian Naive Bayes to show the best performed model on the training set, before and after data reducing.

Image Processing Project (Group Project)
- .Dataset contains 5 classes with imbalance sample of images.
- Applied SMOTE to balance the dataset with 500 samples per class.
- Used Label Encoder , Standard Scaler for preprocessing the train data.
- To avoid overfitting applied Ridge Regression with different regularization parameter (alpha).
- Used Logistic Regression, Neural Networks, CNN to get different types of result to understand the difference between the structures of this types of models.
- Applied Hyperparameter Tuning to get a better accuracy.

Calories Burnt Prediction
- Two datasets with different types of value.
- Merging the two dataset into one.
- Data visualization, checking null value and correlation.
- After splitting data, training the data with Linear Regression and showing result with different evaluation metrices.

COVID-19 Prediction
- Two datasets with different types of value.
- Merging the two dataset into one.
- Data visualization, checking null value and correlation.
- After splitting data, training the data with Linear Regression and showing result with different evaluation metrices.

Fake News Prediction
- Dataset containing text data.
- Used different preprocessing technique like replacing null value, merging data, stemming.
- Applied TfidfVectorizer to convert a collection of text data into a numerical representation using Term Frequency-Inverse Document Frequency (TF-IDF) technique.
- Training Logistic Regression with the training data gained an accuracy of 97.91% on test data.

Gold Price Prediction
- Training Random Forest Regressor which gained a R-squared error score of 98.87%.