README

Traffic_Signs_Research_Report

This is my Phase 4 project during my time at Flatiron School. It focuses on a detailed exploratory data analysis (EDA) using Python to examine an image dataset of traffic signs. The dataset includes 58 different classes of traffic signs.

In the first notebook, I performed the EDA, which can be found in notebook #1 (ending nb1). The second notebook delves into a comprehensive machine learning classification analysis and deep learning convolutional neural network analysis where I trained models to predict whether an image is either a speed limit sign, directional sign, or warning sign. The final model achieved a 99.13% training accuracy and 93.07 testing accuracy on images it has never seen before.

This project demonstrates a practical, real-world application that can be deployed in real world scenarios, such as self driving vehicles, traffic management systems, mobile apps for drivers (similar to google maps), robotics such as delivery robots, traffic law enforcement, toll collection zones, and many more!

- Documents: includes PDF documents of the EDA, technical machine learning & deep learning notebook, and slides used in class presentation.
- Source: includes notebook #1 eda source code, notebook #2 machine learning & deep learning source code, and associated files with the project.

Click here for the Dataset

Releases

No releases published
Create a new release

Packages

No packages published
Publish your first package

Languages

- **Jupyter Notebook** 100.0%