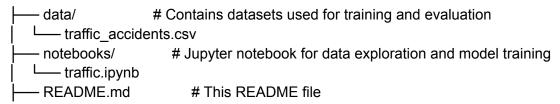
# Traffic Accident Analysis Using Machine Learning

#### **Overview**

This project analyzes traffic accident data using machine learning techniques. The goal is to identify factors that influence accident occurrences and develop a predictive model to assist in accident prevention strategies.

## **Project Structure**



## Setup

#### Clone the repository:

git clone https://github.com/your-username/traffic-accident-ml.git cd traffic-accident-ml

1.

#### **Run Jupyter Notebook:**

jupyter notebook notebooks/traffic.ipynb

2.

# **Usage**

- The dataset (traffic\_accidents.csv) is loaded and analyzed for patterns.
- The notebook (traffic.ipynb) includes data visualization, preprocessing, and machine learning model training.
- Results are evaluated using various performance metrics.

### **Data**

The dataset contains historical traffic accident records with features such as:

- Date and time of accidents
- Location details
- Weather conditions
- Road conditions
- Other relevant traffic-related factors

# **Machine Learning Approach**

- Data cleaning and preprocessing
- Exploratory Data Analysis (EDA)
- Feature selection and engineering
- Training a predictive model (e.g., Linear Regression, Decision Trees, etc.)
- Model evaluation using metrics such as accuracy and RMSE

# Contributing

- 1. Fork the repository.
- 2. Create a new branch (git checkout -b feature/new-feature).
- Make modifications and commit changes (git commit -am 'Add new feature').
- 4. Push to the branch (git push origin feature/new-feature).
- 5. Create a Pull Request.

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## **Contact**

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