Real Time Accident Detection and Ambulance Rescue using Deep-Learning

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Abstract: *Traffic accidents pose a significant threat to global safety. A comprehensive approach uses machine learning frameworks, deep learning techniques, and Python modules to reduce casualties and mitigate damage. The system uses Google API location services for precise geolocation tracking and improves accident prediction accuracy. It also enhances ambulance dispatching efficiency by dynamically assigning ambulances based on location and traffic patterns.*

Keywords: Python modules CV2, Pandas, ML frameworks: PyTorch, NumPy, Keras, Google API Geolocation tracking.

I. INTRODUCTION

This project aims to improve road safety by utilizing deep learning, Python libraries like Open CV for Video Processing and Pandas for Data Management, and machine learning like PyTorch, Numpy and Keras frameworks for Accident Analysis and Google API location services are also used for precise geolocation tracking. It aims to develop a real-time system for accident detection and ambulance rescue using live video feeds from traffic cameras. The system uses convolutional neural networks to identify potential accidents and distinguish them from normal traffic patterns. Once detected, it uses Google Maps API location services to pinpoint the accident and trigger automated actions, including alerting emergency services and dispatching ambulances. The system also provides crucial information for emergency responders.