ARTIVERSE 2.0

Team Name	**: Hogwarts**
Theme	**: Smart Automation**
Title	**: Automated Accident Detection and Alert System for Faster Emergency Response**
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ABSTRACT

Road accidents are a leading cause of fatalities, often exacerbated by delayed emergency responses. This project presents a Machine Learning-Based Accident Detection System that analyzes real-time vehicle data such as speed, location, and impact force to detect accidents. Using machine learning algorithms, the system classifies events as accidents and triggers automatic notifications to emergency services with crucial details like accident location and severity. The system leverages machine learning models trained on historical data and sends notifications. A user-friendly dashboard displays accident data on a map, aiding faster emergency responses. The project aims to reduce response times, improve rescue efforts, and ultimately enhance road safety. Future work includes integrating real-time sensor data and expanding system capabilities to interact with hospitals and traffic management systems.

KEYWORDS:

Machine Learning, Real-Time Monitoring, Emergency Response, Vehicle Data Analysis, Notification System, GPS Location, Safety Systems, Accident Detection.

PROGRAMMING LANGUAGE:

Python, JavaScript.

TOOLS AND LIBRARIES:

scikit-learn, Pandas, NumPy, Matplotlib, Flask.