My Project

Public Transport Safety Through Driver Profiling

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The number of people who currently die every year due to road accidents are 1.3 million globally.

It is high in developing countries and is the leading cause of death for people aged 15 to 29 years.

In Kenya, 3,000 deaths occur every year and about 40% are pedestrians.

These road crashes cost Kenya 300 billion shillings annually which is 5.6% of the GDP.

With the increase in population, it is predicted that road fatalities will rise.
Problem Definition

Causes of Road Accidents

- Human Error: 4%
- Vehicle Condition: 11%
- Traffic Environment: 85%
SOLUTION (Machine Learning)

Vehicle data → Data Analysis → Driver Profiling
Research Objectives

- To analyze the data that has been collected and find out what each input means and how it can be used.
- Identifying an efficient machine learning algorithm for classification of the data.
- Feature engineering which entails using domain knowledge of the data to make the machine learning algorithm work.
System Objectives

- Preprocess the data to make it available for use in the system.
- Classify raw data from the sensors into events such as hand breaking and deceleration.
- Classify driver profile according to the events identified.
- Create a portal to display the outcome of classifying the drivers.
System Architecture
Next Steps & Lessons Learnt

User testing

Looking forward to the alignment of the project with government regulations such as smart licenses.

Learning how to define a problem and ways of identifying a solution.

Understood machine learning much better.
Thank you!