My Project

Public Transport Safety Through Driver Profiling

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Background

- 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

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SOLUTION(Machine Learning)
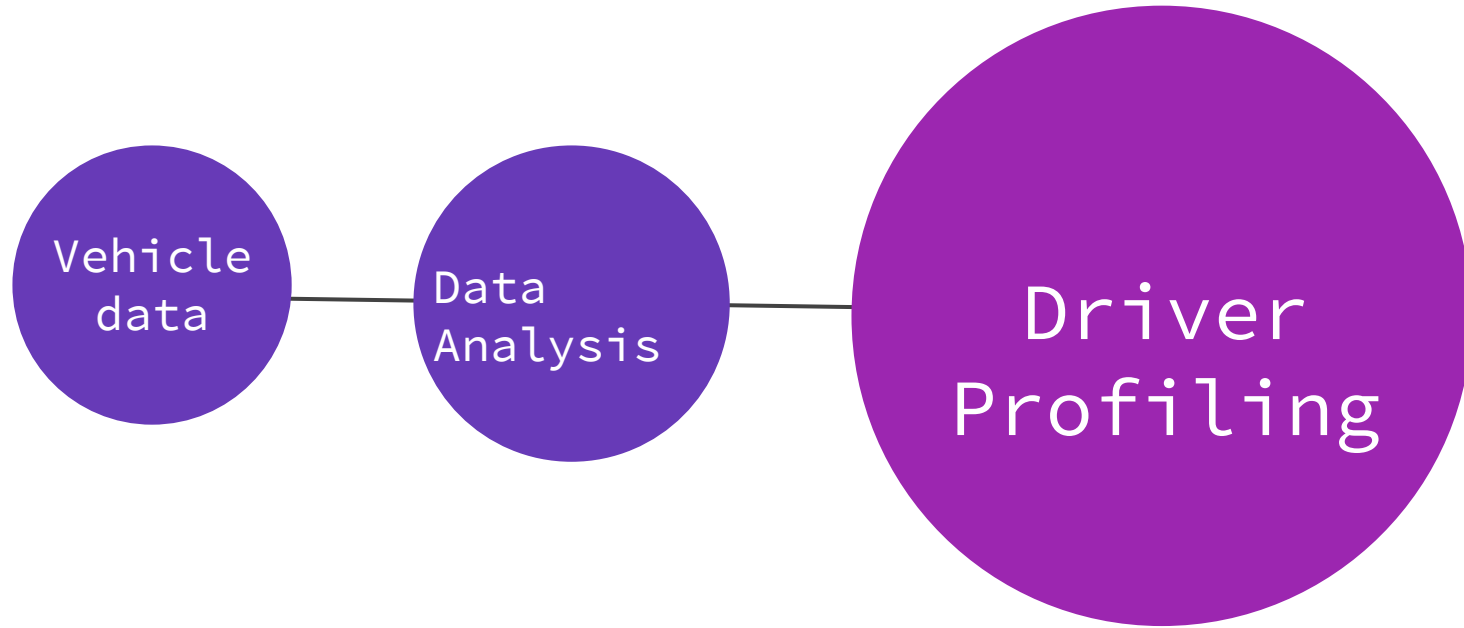
Research Objectives

- 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

Data collected

Machine Learning

Driver profiled
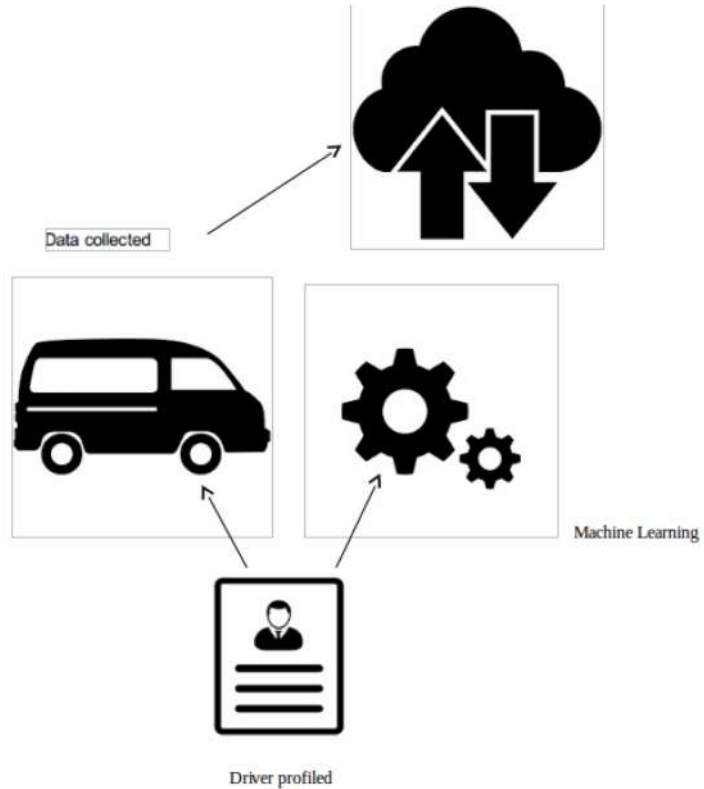
Prototype
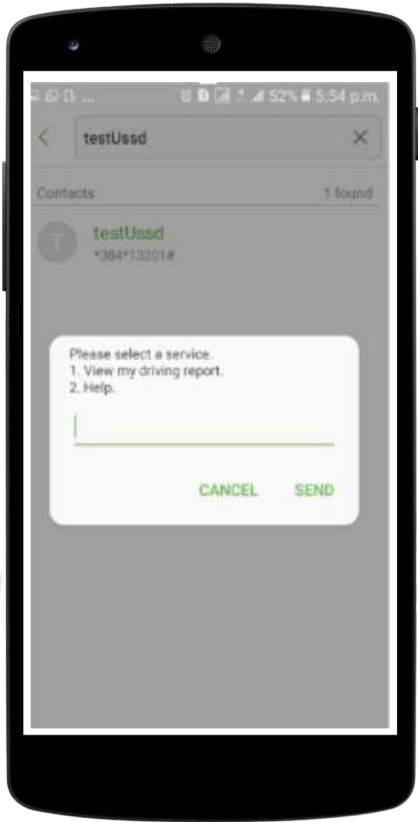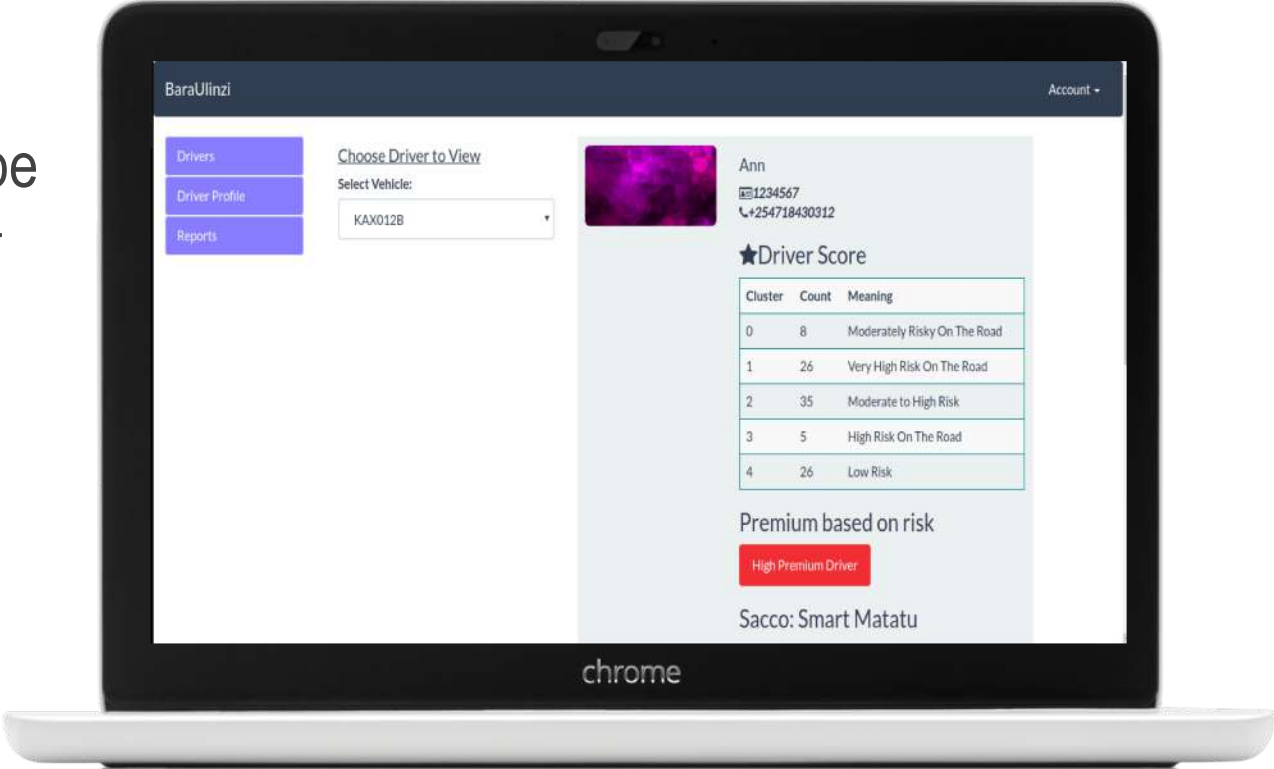
Next Steps & Lessons Learnt

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.

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Thank you!