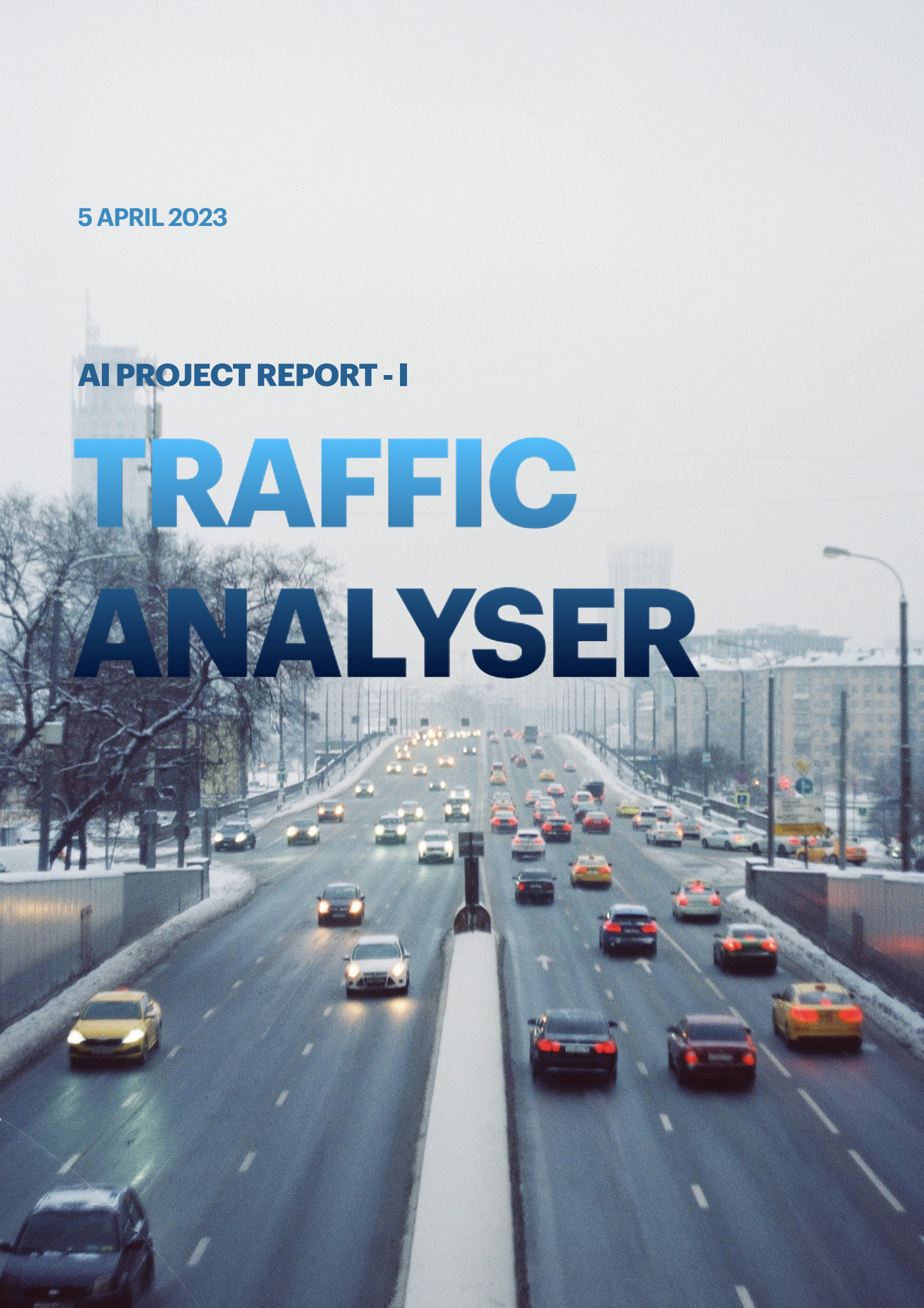5 APRIL 2023

AI PROJECT REPORT - I

TRAFFIC ANALYSER

Team

_____

1. **VENKATA MADHAV - CS20B1047**
2. **V NAGASAI - CS20B1016**

Problem Statement:

Building a traffic analysing tool that suggests the optimal path for reaching a specific destination. It is a common issue faced many people in the cities these days, that to its heavier in metropolitans. With increasing urbanisation and the rise in the usage of vehicles on the road, it has become more challenging to navigate through traffic to reach a destination on time.

The goal of this project is to develop an AI tool, that analyses various factors such as traffic density, distance and mode of travel to suggest the optimal path minimising the distance travelled and time taken.

Overview:

This mini-project will focus on developing the eBay route in a particular chosen area, where the data is collected and analysed to get the best route to the destination.

This project will have a simple user interface where the user can give us the destination in the chosen area and also some important features such as giving the shortest route, best mode of transport, estimated time of travel etc.

We also make use of APIs such as Google Maps API or OSM API to collect the precise traffic conditions and analyse them to get the required information.

Use of AI:

In our project, AI can be very useful in getting the best route as it can help in processing large amounts of data about the traffic conditions and can also help in providing real-time insights.

The main goal of this tool is to learn and adapt to changing traffic conditions, providing users with real-time updates and suggesting alternate (best) routes. Hence, AI would be more accurate and reliable for this tool.

Future Developments:

As of future concern we can also focus on integrations such as, letting the user know about any hazardous activities on the road, or any weather conditions and other environmental factors that affect traffic flow. We can also try integrating this tool with self-driving vehicles to create a fully automated transportation system which nowadays is the talk of the town.

Conclusion:

To wrap things up, the traffic analyser tool is very great tool that can be very useful for the users in the transport system by providing them with real-time traffic data and suggesting the most efficient route, which can save time, fuel, reduce stress, and promote safety on the road.

Contributions:

- Understanding the traffic data (Both)

- User interface - for the user interaction (V Nagasai)

- Dataset establishment - different types of traffic dataset from APIs (Venkata Madhav)

- Classifying dataset - Different types of conditions (V Nagasai)

- Evaluation of shortest path based on dataset (Both)

- Working on a time efficient path (Venkata Madhav)

- Working on an efficient mode of transport (V Nagasai)