**CEF440: INTERNET PROGRAMMING (J2EE) AND MOBILE PROGRAMMING**

**Analysis of a Passenger positioning system (Municipal commuting App)**

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**Design and Implementation of a Passenger Positioning System (Municipal commuting App)**

# **Problem Statement**

The current traditional model of hailing taxis poses several challenges for both passengers and drivers, including increased waiting times, difficulty in locating drivers and increased fuel consumption costs for drivers.

# **Problem Objective**

The objective is to develop a mobile application for both Android and iOS devices that connects passengers and drivers, optimizes fuel consumption, increases efficiency, and provides a secure environment for both parties, resulting in a 30% decrease in waiting time and a 20% increase in overall customer satisfaction.

# **Solution scope**

This project will involve the development of a mobile application that will allow passengers to specify their positions, locate drivers, and connect with them in real-time. Additionally, the app will optimize driver routes to minimize fuel consumption and provide them with passenger location data. The app will be developed for both Android and iOS mobile devices, and it will also incorporate security features to ensure the safety of the passengers and the drivers. The project scope will include designing and developing the software, testing, and deployment to the respective app stores.

# **Other Analysis**

1. Market Analysis:

The transportation industry has grown significantly in recent years, and the introduction of mobile apps has disrupted and transformed the industry. The introduction of apps such as Uber, Bolt, and others has made it easier for passengers to locate drivers and helped drivers optimize fuel consumption by guiding them to locations where there are potential customers. The market for these apps has continued to grow worldwide, and it is projected to grow even further.

1. User Requirements:
   1. Passenger

To develop a successful mobile app that caters to both drivers and passengers, the app must meet specific user requirements. For passengers, the app should have a user-friendly interface for specifying their positions, and it should provide them with accurate information on the location of the driver

* 1. Driver

For drivers, the app should optimize their routes to minimize fuel consumption and provide them with real-time information on passenger locations. The app must also ensure the safety of both the driver and the passengers.

1. Benefits of the System:

The system has numerous benefits for both drivers and passengers. For passengers, it reduces the amount of time they have to wait for a taxi, and it provides them with an easy way of locating their driver. For drivers, it helps them save fuel costs by directing them to areas with higher demand for their services. The app also provides security for both the driver and the passenger.

1. Revenue Model:

The revenue model for this app could be based on commission where the app's owner takes a percentage of the driver's fare or through subscription and advertising revenue.

# **Conclusion**

The system that is used by both passengers and drivers is an innovative solution to the transportation industry's traditional model. Its ease of use, fuel efficiency, and secure environment make it an excellent option for both parties.