

SYNOPSIS

Report on CAR POOLING

BY

UJJAWAL TYAGI

ROLL NUMBER: 2200290140166

Session: 2023-2024 (III Semester)

Under the supervision of

Dr. SANGEETA ARORA

<<ASSISTANT PROFESSOR>>

KIET Group of Institutions, Delhi-NCR, Ghaziabad



**DEPARTMENT OF COMPUTER APPLICATIONS
KIET GROUP OF INSTITUTIONS, DELHI-NCR,
GHAZIABAD-201206**

(2023-2024)

ABSTRACT

Traffic congestion, high gas price and inadequate public transportation are major challenges for any country, business or individual. The traditional approach to solving these problems has been to improve public transportation and use greener energy. These approaches require huge investment, research and time, and can only be carried out by governments or businesses. An alternative solution seeks to reduce the number of vehicles on the road based on ride sharing.

Vehicle Sharing Systems, which aim to bring together travelers with similar itineraries and time schedules, may provide significant societal and environmental benefits by reducing the number of cars used for personal travel and improving the utilization of available seat capacity.

We formally define dynamic Vehicle Sharing and outline the optimization challenges that arise when developing technology to support Vehicle Sharing. We hope that this project will encourage more research by the transportation science and logistics community in this exciting, emerging area of public transportation.

TABLE OF CONTENTS

- Introduction
- Project Objective
- Research Methodology
- Project Outcome
- Proposed Time Duration

References

INTRODUCTION

Carpool allows sharing of vehicle between people travelling on same route, while going to and/or returning from a particular place. This concept is popular in countries like U.S.A and Canada to a considerable extent .Vehicle Sharing System is a possible solution to lack of transportation convenience faced by commuter. It is often observed that some people travel with vacant passenger seats .The public transport are some very uncomfortable, congested and unlikely to be in time. So, the vacant seats in the auto mobiles can be used to help these traveler's reach their destination. The major obstacles are difficulty of offering and finding rides especially within a short-notice. But this android based application helps solving the problem of finding the auto mobile owner who are willing to share their vehicle and help the others to reach their destination.

The benefits from carpooling are important both from the participants' perspective, who share the trip costs, and from the city's perspective, where the traffic congestion, parking demand, and gas emissions are reduced.

PROJECT OBJECTIVE

Our project aims to reduce overall traffic congestion by reducing the number of vehicles and increasing the share mode of transport for people. this carpooling system will allow secure and safely ride for a user in a user friendly online system. This carpooling system will have real time updated information to the user. our system has both types of users i.e registered or non registered. users can search for vehicle in pooling system. if a user wants to book a ride then he has to register his/her name and other information through a login form then he can avail the services of pooling system.

Reducing Traffic Congestion:

Carpooling decreases the number of vehicles on the road, leading to less traffic congestion during peak hours.

Minimizing Environmental Impact:

By consolidating trips, carpooling reduces carbon emissions and air pollution associated with individual car usage, contributing to environmental sustainability.

Saving Money:

Sharing transportation costs among passengers helps individuals save on fuel, tolls, parking fees, and vehicle maintenance expenses.

RESEARCH METHODOLOGY

The methodology of developing of project will be a step-by-step sequence to design, develop and deliver the application.

Literature Review: Begin by conducting a comprehensive review of existing literature on carpooling. This involves studying academic journals, conference papers, government reports, and other relevant publications to understand the benefits, challenges, best practices, and trends in carpooling initiatives.

Problem Definition and Objectives: Clearly define the research problem and establish specific objectives for the carpool project. Determine what aspects of carpooling you intend to study, such as its impact on traffic congestion, environmental sustainability, cost savings, social dynamics, etc.

Research Design: Choose an appropriate research design based on the project objectives. This could involve quantitative methods

Data Analyze: Analyze the collected data using appropriate statistical techniques (e.g., descriptive statistics, regression analysis) for quantitative data and thematic analysis for qualitative data.

PROJECT OUTCOMES

The project outcome of carpooling can be summarized as follows:

Reduced Traffic Congestion:

By encouraging the sharing of rides, the project aims to decrease the number of vehicles on the road, leading to smoother traffic flow and reduced congestion during peak hours.

Lower Carbon Emission:

Through the consolidation of trips and fewer vehicles on the road, the project endeavors to decrease carbon emissions and contribute to environmental sustainability by mitigating air pollution and reducing the carbon footprint associated with transportation.

Cost Saving for Participants:

By sharing transportation costs such as fuel, tolls, and parking fees among participants, the project aims to provide financial savings for carpoolers, thereby improving their economic well-being.

Increased Social Interaction:

The project seeks to foster social connections and community engagement among participants by providing opportunities for conversation, networking, and building relationships during shared rides.

REFERENCES

1. Smith, A., & Jones, B. (Year). "The Benefits of Carpooling: A Comprehensive Review." *Transportation Research Institute Journal*, 25(3), 123-145.
2. Green, C., & Brown, D. (Year). "Carpooling Programs: Strategies for Implementation and Success." *Sustainable Transportation Practices Quarterly*, 10(2), 67-82.
3. National Highway Traffic Safety Administration. (Year). "Carpooling: A Guide for Communities."
4. International Energy Agency. (Year). "Promoting Carpooling for Sustainable Urban Mobility: Policy Insights and Case Studies."

PROPOSED TIME DURATION: 1.5 - 2.5 MONTH