PUNE INSTITUTE OF COMPUTER TECHNOLOGY
DHANKAWADI, PUNE – 43

UG SEMINAR ABSTRACT
Academic Year: 2022-23

DEPARTMENT: COMPUTER ENGINEERING

Seminar On: Travel Time Optimization Using Machine Learning

By:
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1. Name of The Topic: Travel Time Optimization Considering Class of Vehicle and Geographical Location.

2. Topic wise contents:
   1. Introduction
   2. Existing Methodologies
   3. Proposed Solutions for Better Accuracy
   4. Conclusion

3. References Used:

1. Qui, B. Fan, W. Machine Learning based Short-Term Travel Time Prediction: Numerical Results and Comparative Analyses. Sustainability 2021, 13, 7454.
2. YANG LI, DIMITRIOS GUNOPULOS, CEWU LU, LEONIDAS J. GUIBAS, Personalized Travel Time Prediction Using a Small Number of Probe Vehicles, ACM Transactions on Spatial Algorithms and Systems, May 2019.

Date: 22/09/2022 _____
Student

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REMARKS BY UG SEMINAR CO-ORDINATOR:

Date: _____
UG Seminar Coordinator

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Abstract:. Transportation and delivery systems are deeply intertwined with our day-to-day life. With increasing connectivity, the effect of time on customer satisfaction is becoming more prominent as it is observed that services from an organization with efficient time management are preferred over any other similar organization. In such competitive times, for a transportation and delivery system to prosper travel time optimization is a must. If the companies know the location at which the goods are to be delivered, it will help them to plan a route that would help the delivery personnel to deliver all the goods in the least time and by covering the least possible distance. This problem is similar to the Travelling Salesman Problem, a famous computer science problem. Traversing a path in minimum possible time by avoiding congestion is desirable.
Existing studies of travel time optimization are based on Extreme Gradient Boosting Algorithm, Decisions Trees, Genetic Algorithm that considers various factors such as day and time of travel, usual traffic data and distance between source and destination. We aim to study the impact of type of vehicle and geographical area concerning the transport and delivery system along with existing models of optimization.

Keywords: Travel Time Prediction and Optimization, Extreme Gradient Boosting Algorithm, Decisions Trees, Genetic Algorithm.

REMARKS BY UG SEMINAR GUIDE:

Date:

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UG Seminar Guide

(Prof. Dr. Mukta Takalikar)