Senior Design Project Report

CSE 499

Traffic Analysis and Prediction Application for Dhaka City Using Clustering and Association Rule Mining and Activity Recognition Using Logistic Regression

Submitted By

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ELECTRICAL AND COMPUTER ENGINEERING

NORTH SOUTH UNIVERSITY

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Agreement Form

We take great pleasure in submitting our senior design project report on "Traffic Analysis and Prediction Application for Dhaka City Using Clustering and Association Rule Mining and Activity Recognition Using Logistic Regression". This report is prepared as a requirement of the Capstone Design Project CSE499 A & B which is a two semester long senior design course. This course involves multidisciplinary teams of students who build and test custom designed systems, components or engineering processes. We would like to request you to accept this report as a partial fulfillment of Bachelor of Science degree under Electrical and Computer Engineering Department of North South University.

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ABSTRACT

Traffic is one of the major problems for any populated city. Currently, there are many traffic alert systems available and almost all of them work with user submitted inputs to give those alerts. We worked on developing a system that will not depend on any user's manual input but it will be able to retrieve traffic and activity related data from the user's device and vehicle tracking devices automatically in order to use that data to predict traffic and alert users. Our system tries to understand the user's activity using accelerometer sensor data and speed to determine whether the user is sitting at home or going somewhere by a bus or car. Once it is verified that the particular user's location and activity is related to traffic conditions, it takes that user's location related data from his or her device. Using this data from user's devices and the data from vehicle tracking devices, we intended to predict the traffic conditions and let users know about the traffic for particular routes.