FINAL YEAR PROJECT REPORT

PARKING AVAILABILITY PREDICTOR

In fulfillment of the requirement
For degree of
BS (COMPUTER SCIENCES)

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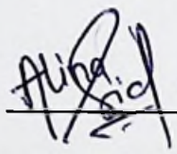
DECLARATION

We hereby declare that this project report is based on our original work except for citations and quotations which have been duly acknowledged. We also declare that it has not been previously and concurrently submitted for any other degree or award at Bahria University or other institutions.

Signature : 

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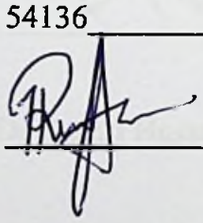
Signature : 

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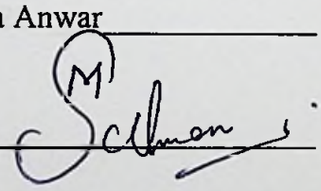
Reg No. : 54166 

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PARKING AVAILABILITY PREDICTOR

ABSTRACT

Smart cities are part of the continuous advancement of technology aimed at providing a better quality of life for their inhabitants. Urban transportation is one of the most important components of a smart city. Finding a suitable parking in a congested city is a time-consuming and fuel-intensive process. It affects the daily stress levels of drivers and citizens, since urban traffic congestion has been more common due to the increasing number of vehicles in these cities. Furthermore, even in the parking lot, it is difficult to find a parking space, and it is not an easy task for drivers in circles. Studies have shown that drivers looking for a parking space cause up to 30% of traffic congestion. In this case, it is necessary to predict the available space in the parking lot where the driver wants to park. In this project, we propose a new system that combines IoT (internet of things) and an ensemble-based predictive model to optimize predictive availability of parking spaces. The project allows drivers to know, in advance, the status of the parking system in real time via wireless networks of sensor devices. This work is devoted to the study of data generated by parking systems with the aim of developing predictive models that generate predictive information. This can be useful for improving the management of parking spaces, especially street parking, while significantly impacting city traffic. In this project, we propose an intelligent parking space prediction model, using a long-term short-term memory (LSTM) neural network.

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