Final Year Project Report

ParkTor (Parking Locator)

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Deliverable
- Report 1 Volume
- Program 1 CD

Bahria University (Karachi Campus)

2017-18

Acknowledgments

Firstly, we would like to thank **Almighty Allah**, for his countless blessing that he bestowed upon us that provided us with firm belief that we can accomplish our goal and produce a good quality work.

It is our sincere duty to express our thankfulness to our institution, **Bahria University Karachi Campus**, a platform that provided us with premises to work upon our project.

We would like to thank our HOD, **Sir Sohaib Ahmed**, who has been generous enough to provide us with resources to accomplish our project, without which, it wouldn't have been possible.

We also owe a debt of kind regards to our supervisor, who deserves an utmost respect for his priceless efforts and deepest concerns regarding our final year project, **M. Mursaleen Javed,** the one with a mind of a genius. It was his endless encouragement that motivated us to come up with this project. It was his prime effort to provide us with valuable advises that made a significant contribution to the success of this project.

Thanks.

With warm regards,

Arshia Rauf

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Abstract

ParkTor is an android application that came into existence upon realizing the persistence of the issue of the parking space availability and the need to address that issue through the use of software and hardware technology. The main goal was to use the already available technological resources in an efficient manner as to solve the common problem that most of us have to face on a daily basis.

We brainstormed and researched on the potential solutions of how the parking issue could be resolved. At first, we proposed the use of an external camera that would be placed in a real environment which would capture the video of the designated parking area and send the coordinates to the server. When the user requests for a parking space, the application will retrieve the coordinates of the available parking space and show user the real time location of the parking slot. Next, upon user request, a GPS navigation would be displayed to the user on the screen from their current location to the desired location of the available parking space.

Upon thorough study of the project and considering the unavailability of the environment to deploy our project, we narrowed down our scope to the use of a dummy model and the camera of the laptop. This facilitated a comparatively effective implementation of our concept.

We devised the project that detects a parking location and notifies the user whether the specified slot is occupied or vacant. Our project currently focuses on a single parking slot, but we have planned to enhance our project and bring variation to it by expanding the scope and implementing it in such a way that a wider area is covered, an external camera is used to capture the video of the whole area and multiple parking slots are managed simultaneously. For now, we have concluded our project such that it detects a parking area and notifies the user about its status whether it's empty or filled.

Keywords: Android Application, Image Processing, Object Detection, Parking Slot

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