

**UNIVERSITI TEKNOLOGI MARA**

**RIDER PARKING GUIDANCE USING  
LOCATION-BASED SERVICES AND  
CROWDSOURCING**

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## ABSTRACT

Food delivery services have become increasingly popular in Malaysia in recent years, as more people turn to the convenience of having meals delivered to their homes or offices. One issue that has arisen with the proliferation of these services is the difficulty that delivery riders often face in finding parking spaces, particularly at malls. To address this issue, a new application is developed to help food delivery riders to locate available parking spaces outside of malls, as well as identify vendors who can provide the desired food for delivery. In addition to helping food delivery riders find parking and vendors, the application utilizes geofencing and geolocation technology paired with crowdsourcing to further enhance its functionality. When delivery riders approach the mall, they receive a notification alerting them to the availability of parking spaces in the area. The geolocation technology allows the application to track the exact location of the device in real-time, using GPS data and other information. This can be used to provide the rider with turn-by-turn directions to their destination, as well as to accurately track their delivery route and record their progress. The Waterfall model is selected for this project due to its suitability for smaller projects. It offers simplicity in comprehension and execution. The process involves four phases which are requirements analysis, design, implementation, and testing. Overall, the integration of geofencing and geolocation technology into the food delivery application will help to improve the efficiency and reliability of the service, while also providing a better experience for the riders. This project's achievements have highlighted some limitations with potential for future work and improvement such as usage of the API to avoid excessive billing, considering cross-platform solutions, extending compatibility to older Android versions and iOS versions and ensuring persistent geofences.

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