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Bike and Running Trails on Android based on Google Maps API

Abstract

A series of trails either by biking or running can be recorded and represented as a complete trail by means of an Android application. GIS[1] provides many ways in which this can be done. But, this becomes a tedious task when additional information needs to be included at a later point of time or some trails need to be modified.

The motivation behind this thesis is to provide a simple GIS[1] framework to create an application on Android for Bike and Running trails dynamically using Google Maps API[3] and Android Java. This application provides an interactive GUI[4], enabling users to provide geo-spatial time sensitive data to the application to create a trail[2] map, without the need to perform any complex code or have any knowledge of the internal working of the system. The trails can be saved as a "new trail" or traverse along the existing trails with the help of Google Maps.

The application is useful for Bikers/Runners to create a record of events easily and project it on a map, and also make it easily available for friends to see by uploading then to the profile created. This application provides various statistics by keeping track of the various trails traversed by the person. The application provides various utility tools like timers to determine the average speed and all-time best rides, thereby making it easier to assess oneself which would be beneficial for him/her to achieve certain goals.

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