DESIGN APPLICATIONS SMS AUTOREPLY TO DRIVERS BASED ON TIME SERIES DATA GPS

Student’s Name : Putu Anrisa Priyasta
NRP : 5108 100 100
Major of Department : Teknik Informatika FTIF-ITS
Supervisor I : Waskitho Wibisono, S.Kom., M.Eng., Ph.D
Supervisor II : Henning Titi Ciptaningtyas, S.Kom., M.Kom.

Abstract

Handphone is one of medium communication that has become a primary need for humans. Almost every day people interact intensively with these tools. Moreover, with the development of technology-based Android smartphone, users are increasingly difficult to reduce interaction with these devices. The use of this device not only to communicate, either by text message or by phone, but can also be used for entertainment, work or find a location with a GPS. The problem that always appear by this times are users need to reduce the interaction with the tool, especially when driving. In fact a lot of accidents that occurred due to negligence of users who use mobile phones while driving. This Final Project builds an application that can detect whenever the user driving from GPS data and also can tell user with autoreply SMS to minimize the use of smartphones while driving.

To identify whether users are driving or not in the street then use the data retrieved from the GPS then these data are sorted according to the time sequence (time series) and analyzed. The data were taken in the form is the speeds when users are on the road. The method used in recording speed is the average speed and the method of direct retrieval speed (current speed), while the condition of the vehicle used for classification decision.
tree method to determine whether the vehicle is road, stop or pause time waiting juncture.

Based on testing of application functionality is capable of detecting the driver was on the road. This application also has the ability to send messages while driving autoreply if the user receives a message. From the test results obtained performance of different accuracy. When the vehicle is on a smooth highway 100% accuracy, if the vehicle is in bad shape accuracy obtained ranged 80-85%, whereas in the street with a red light obtained accuracy to 90%.

**Keyword**: SMS autoreply, GPS, average speed, Time series, Decision tree, Smartphone Android.