Automated Safety Railway Application

For Passengers

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**Introduction**

Automated Safety Railway application is an app that can detect or alert a certain person that’s using the app about the safety rules of riding in railways it also notifies the user the time arrival of the vehicle on every destination in order to minimize the accidents it is unmanned the app alerts the station passenger about the position of train using GSM technique.

Railways are now a most convenient vehicle for people especially for those people who doesn’t want to wait or to be stuck in a traffic. Railway plays important roles in everyday life of the people. Railways are first invented in year 1804 a first steam locomotive railway known as Penydarren or Pen-y-Darren locomotive and was built by Richard Trevithick, used to haul iron and the first train to carried a load of 10 tons of iron as the time goes by they make used of it as a transportation it can load almost a 50 or hundreds of people. In the Philippines most of the people especially in manila are using railway cause its more convenient and to avoid heavy traffic cause railways have their own roadway that they are the only one aloud to use that’s why lots of people preferred to ride in railways.

Human errors are sometimes the cost of accident in this application it ensures the safety and also to avoid any sabotage or danger to passenger, to protect civilians against both intentional and unintentional threats, rail transportation has become

increasingly automated by the use of this application we can lead to a better and more automated railway station by using GSM . A GSM system may help in developing the application it was developed as a digital system using time division multiple access (TDMA) technique for communication purpose .There are some complaints regarding the railways in the Philippines like poor air-condition, guards failed to control the exact number of passenger that should be in a train, lrt or mrt even pnr, the delayed of arrival is also one of the most complain of the passenger. The idea that GSM is  open and digital cellular technology used for transmitting mobile voice and data services it is a great help in developing an application that alerts the status of the railway controlled and monitor the safety of the passenger to avoid miss communication. [European Rail Traffic Management System](https://en.wikipedia.org/wiki/European_Rail_Traffic_Management_System) (ERTMS) standard and carries the signalling information directly to the train driver, enabling higher train speeds and traffic density with a high level of safety.

GSM-R is standardised to be implemented in either the [E-GSM](https://en.wikipedia.org/wiki/E-GSM) (900 MHz-GSM) or [DCS 1800](https://en.wikipedia.org/wiki/DCS_1800) (1,800 MHz-GSM) [frequency band](https://en.wikipedia.org/wiki/Frequency_range) which are both being used around the world like Europe, China, South Africa and a lot more countries in improving the safety of their railways.