**Project Abstract: Traffic Incident Management**

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Autonomous and connected vehicular systems infrastructure are drastically developing to improve traffic safety and operation especially in freeways where drivers are experiencing higher average speed which leads toward more sever crashes, and also higher level of congestion which decrease the level of service and increase travel time. To this ends, traffic incident management including incident detection, and perdition would be a key component as the infrastructures and vehicle would be connected and telecommunicate required information. Various methods to flag accident and congestion on freeways have been introduced over the course of past ten years, however, false alarms rate on those methods can be potentially reduced by using multiple data sources such as probe data and radar based data, weather data in combination of social media data (Twitter, Facebook, etc.). More reliable incident trigger with reduced number of false alarm in less amount of time will aim to also help police, emergency services, and road authority traffic officers to decide and response to the incident in a better way. This study aims to analyze large traffic data (approximately 100 GB of INRIX data and 10 GB of Wavetronix data) to improve the detection rate and detection time by using multiple data sources and reduce the number of false alarms. Big data analytics such as MapReduce, Hadoop, and Python programming will be used as the purpose of this study.