PROBLEM STATEMENT :

As urban population growth continues to outpace rural, cities across the globe continue to become congested and more chaotic. Managing vehicular movements in cities is a cumbersome job.To address this challenge, nascent technologies like Internet of Things (IoT) and data analytics can be used. Presently, manual ways are used to operate traffic switching light and monitoring of traffic. We aim to build intelligent Traffic Management System ensuring efficient traffic flow and monitoring with smart controlling operations.

SCOPE :

Managing traffic flow efficiently in near real-time.
Reporting accidents.
Clear passing to emergency vehicles,prioritizing vehicles.
Providing data for social analytics like vehicle population,traffic,pollution,etc.
It helps in implementation of 'smart city' concept.

CURRENT SYSTEM :

Delhi Police has proposed the system ITMS that uses artificial intelligence to manage traffic and an array of sensors to detect violators, which will be implemented in three phases, with the first most likely to be completed by 2019.

The Brihanmumbai Municipal Corporation (BMC) is also looking to upgrade its software that was created 10 years ago, and has not been upgraded since
Pune Municipal Corporation may use an advanced traffic management system developed by Centre for Development of Advanced Computing (C-DAC), which uses real-time data to monitor traffic lights and control traffic flow in the city.

IMPLEMENTED SYSTEM :

The city of Glasgow in Scotland has recently upgraded its system that provides bus priority at intersections and real-time information to passengers, with the complete package now hosted on the 'cloud'.
Japan has already successful implemented technology for more green signal time for longer traffic signal lines and reduced traffic congestion by 35%.

The city of Toronto, in Canada, has recently announced the launch of two smart traffic signal pilot projects which will be able to independently adjust to real-time traffic conditions.
Australia, Asia and the U.S. uses Sydney Coordinated Adaptive Traffic System(SCATS) which makes decisions using radar detection to measure traffic flow on both sides of the intersection.
Miami-Dade County had approved a project by California-based company Econolite Control Products introduces new technology to operate traffic lights according to the changing flow of vehicles.
The Virginia Department of Transportation (VDOT) has recently selected San Francisco-based mobility analytics firm StreetLight Data to provide on-demand traffic and transportation intelligence.

Points in consideration for traffic flow

Monitor the effects of new signage and/or traffic-light scheduling in near real-time.
Optimize traffic flow during the construction seasons,festival season and other traffic disturbances.
Considering location i.e near airport,tourist place,etc.
Priority of vehicles.
Pedestrians waiting to cross at the local site.