

## Efficient Churn Prediction System with MI-IoT

R.Gowthamani<sup>1</sup>, K.Sasi Kala Rani<sup>2</sup>, S.Anandha Swarna<sup>3</sup>, C.Bharathi Priya<sup>4</sup>,  
M.Akil Vishnu<sup>5</sup>, Malladi Srinivas<sup>6</sup>, Pankaj Dadheech<sup>7</sup>,

<sup>1,2,3,4,5</sup>Dept. of Computer Science, Sri Krishna College of Engineering and Technology,  
Coimbatore, India

<sup>1</sup>gowthamanir@skcet.ac.in; <sup>2</sup>sasikalaranik@skcet.ac.in; <sup>3</sup>16eucs019@skcet.ac.in;  
<sup>4</sup>16eucs038@skcet.ac.in; <sup>5</sup>16eucs014@skcet.ac.in

<sup>6</sup>Dept. of CSE, K L Deemed to be University, Guntur, Andhra Pradesh, India,  
<sup>6</sup>srinu\_cse@kluniversity.in

<sup>7</sup>Dept. of CSE, Swami Keshvanand Institute of Technology, Management & Gramathan (SKIT),  
Jaipur, Rajasthan, India, <sup>7</sup>pankajdadheech777@gmail.com

### Abstract

In today's situation, where time and patience of people are so rare, we mainly focus on the four cross junctions in our project because the traffic gets cleared with less time in comparison with the single road. Although both the situations are hectic, the four cross roads are worse due to waiting for no reason. And so we designed a dynamic system to manage the traffic in an effective way using machine learning and IOT. The thing which works with the connection of internet is called IOT. There are millions and millions of data being processed each minute and normal storage devices are not possible to store these data. These data are processed and stored in the cloud. The cloud is a massive storage where you can access it from anywhere and through any device. The above described concepts are used in this project effectively. We proposed a new technology used for four way roads by using sensors for calculating the distance of the vehicle, and store the vehicle and time count by using sensor. Sensor finds the distance of vehicle and compares it with the big data values. Then the signal is determined using the data sensed from the sensors. When the road is clear till hundred meters, the signal turns red at that road and signal green is diverted to next road which prevents waiting time thus applying the support vector machine algorithm.

**Keywords:** Big data, cloud, support vector machine algorithm, IoT, Machine Learning

### 1.Introduction

In this modern fast moving digital world, where the patience is rare as the time and tide waits for none, the wait for the green signal on the traffic road is like testing our patience. In the four cross roads, the signal will be green on the free roads and red on the crowded roads. This makes people to wait impatiently. To address these limitations, STMP based on unsupervised online incremental Machine, Deep and deep reinforcement learning is used[10]. The above idea can't solve this problem completely as the data are chosen based on the Google map tracking where, the vehicle location and routes are tracked. Then the traffic is calculated accordingly. There are many cases where the person may change the route at the last minute or the Google map may divert them. So the data is miscalculated. To avoid this scenario, we sense the road distance till 100 meters and calculate the time