**First Increment**

**Introduction**

The primary goal of our project is to extend the existing GLTron which is a touch based game app and implement the same as a gesture based game app. The game uses the accelerometer sensors form the sensor tag to recognize the direction and move bike in that direction.

**Project goal and Objective:**

The main objective is to learn the Machine learning concepts and gesture recognition. For this to achieve we first have to train our system by taking different training samples by pulling accelerometer readings (x,y,z values)from the sensor tag via Bluetooth connection.

Now labeling is done to particular gesture (array of x,y,z values), and make considerable number of samples for same gesture, so the training data is robust enough to convey a particular gesture

**Project Background and related work:**

* GLTron (open source android game)
* Sensor tag (Open source Android application)

**Proposed System:**

* GL Tron App.
* The data obtained from training will be stored in the Hbase .
* Sensor tag is used as a motion sensor to play the game.

**Devices/Sensors:**

The devices we have planned to use are the sensor tag, android smart phone. Sensor tag is used

to store the gestures left, right, up and down. The smart phone is used as an interactive surface to

play the game.

**Data Collection and Preparation:**

A gesture is used to make a call a turn, so as to turn into that particular direction. First, the

system is to be trained for gestures. Then, a gesture is assigned to that direction through code.

The system is trained using the data collection initially using the testing data.