

## Requirements

- ❖ PHP
  - Install php5 with support for curl on an Apache Server
- ❖ Matlab
  - Matlab R2011a or higher
  - Include MySQLConnector.jar (JDBC Connector) to enable connections to MySQL. Refer <http://www.mathworks.in/matlabcentral/answers/32618-connecting-to-mysql-using-jdbc>
- ❖ Matlab Compiler Runtime
  - This is required for packaging the required Matlab modules to be used in the Analytics Viewer Java Application. Currently working with MCR version 7.15.
  - Documentation on the same can be found at <http://soliton.ae.gatech.edu/classes/ae6382/documents/matlab/mathworks/javabuilder.r.pdf>.
  - Instructions to build the required SensoSaur.jar file is given in <http://www.mathworks.com/products/javabuilder/>
  - export LD\_LIBRARY\_PATH =  
/opt/MATLAB/MATLAB\_Compiler\_Runtime/v715/runtime/glnxa64/
  - export XAPPLRESDIR=/usr/local/MATLAB/R2012b/X11/app-defaults/
- ❖ Java
  - Java 1.6 or higher
- ❖ MySQL
  - MySQL is to be installed with root and password known

## User Manual

- ❖ Analytics Viewer
  - The 4 main features of this application can be found in the File Menu
    - View Comments
      - Shows the comments in the database in a comment cloud
      - Shows the distribution of the sentiment of the comments
    - View Heat Map
      - Shows the Heat Map of the location traces selected.
      - Shows the distribution of the landmarks in the mall
    - View Trend
      - Shows the distribution of time spent by consumers in the vicinity of various commodities in the traces selected
    - View Trace
      - View the location trace produced by a particular customer's sensor data, along with the landmarks formed.

Feature No, smooth, variance	Feature Name
1, 8, 15	Modulus(Accelerometer)
2, 9, 16	Modulus(Magnetometer)
3, 10, 17	Gyro-z
4, 11, 18	Rotation Matrix -z
5, 12, 19	Signal Magnitude Area of linear accelerometer
6, 13, 20	Sound
7, 14, 21	Light

#### ❖ MySQL

- The data currently stored in the database can be viewed by logging in as root
  - `mysql -u root -p landmark`
  - the password is “ananth”

#### ❖ Landmark Data Viewing

- Other data regarding the specifics of the landmarks is stored in the Matlab/stable/ subdirectory. These .mat files can be viewed by typing this in the Matlab console.
- `Data = load('path to the .mat file')`

#### ❖ Phone Application

- Any user should register by entering the username, password and phone details, which registers both the user and the device.
- His credentials are stored in the phone, so that he remains logged in.
- You can log out, after which you will be redirected to the login page.
- The main page of the phone Application has two modes:
  - Customer [default view]
    - He enters the mall, and starts logging the sensor data by pressing “Log In”
    - When the person wants to comment, he enters the rating and the corresponding comment and presses “submit”
    - Any increased activity like “buy” has to be indicated by pressing “Tick”.
  - Mall Owner
    - He enters the mall, clicks on “Annotate” button and starts logging by pressing “Log Off” toggle button
    - Enters the information such as door, corner, stairs as and when he passes by them, by clicking on the “Tick” button
    - This way, he enters the initial information required to generate seed landmarks.