## PROJECT HEADLINES

*This Project is about developing a Health Activities Monitoring System by collecting the Twitter Hash-tags, analyzing them then visualize the information via website to provide many services to the costumers:*

- *Heat map with per capita population data.*
- *A competitive game based on hash-tags.*
- *An interactive markers map.*
- *Activates recommendation according to weather as well as the hash-tags.*
- *The calories meter.*

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**Website:**

github.com/mohjaba/Health-Activity-Monitoring

RUTGERS

# Health Monitoring Analytics


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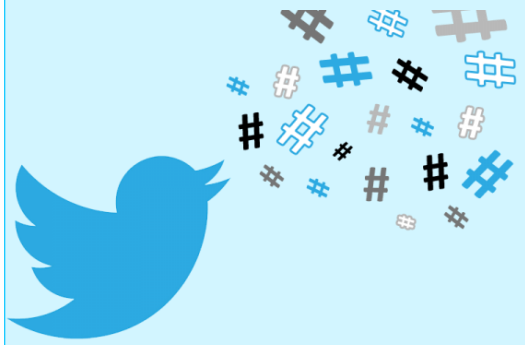

*Rutgers University*
*Software Engineering*

# Benefits

This project can be useful for many people:

**Exercise enthusiasts:**
They could use our website to easily check out what are the popular nearby physical activities, and what is the recommended activity is right now.

**Healthy lifestyle enthusiasts**
These people may be more interested in overall health, such as nutrition, stress reduction, etc, but not as into actual exercise as the exercise enthusiast is, but they still may want to use our site to help with their healthy lifestyle.

**Government / Research Institutions**
they may be interested about the most popular physical activities by different areas, or people's participation rates in different kinds of activities.

**Sports Company**
Sports Companies could use our website to know the popular sports nearby and in this way, adjust their commercial or selling strategy to make the company more successful.

**Gym**
For gym staffs, or similar exercising center staffs, they could use our website to know the popular sports nearby, and the basic ratio of different kinds of sports.

## PROJECTS FEATURES

- **For the improvement upon the heat map, we will use per capita population data combined with twitter data to create a map based data visualization that displays per capita data. This will give us more insight into regional differences among populations of the US than raw count data would.**
- **Then for the gaming system, we will create a competitive game that will assign points and track scores by areas, such as states and counties. The point assignment will be based only on the tweets from each area. Briefly, based on the number of tweets or the relative number of tweets per area (i.e. the ratio of relevant tweets and the population), a scheme for point assignment will be devised. Also in order to keep the game competitive, we will also subtract points from areas where the residents are exercising less than they had been during previous periods. We mainly want to use the ratios because we think that it is more fair to reward communities in which their residents exercise more as a whole, and not be biased towards areas with larger populations.**
- **Thirdly, for the interactive map, we can distribute display information. The map's options will include many types of health and sports activities like types of sports (football, soccer … etc.) or fitness activities like working out at the gym. Briefly, these maps will show you the collected data from twitter hash-tags for individual activities. The user will be able to choose the preferred activity from a list, then a map will show how this activity is distributed in the area that the user chooses. The list, which will be close to the map, will be updated whenever the user changes the area in the map, because the list will include the top number of the activities in the specific area only.**
- **Then the recommendation part would have a form with two questions, after the user chooses the answer, the questions would disappear and would display a word cloud. Upon clicking each word in the word cloud, the cloud would display detailed information under the word cloud. The information would include the activity location, popularity, and so on. There would also be a "choose again" button to let the user change his choice.**
- **Finally for the calorie meters, we will track automatic tweets that are generated by workout monitoring devices and mobile applications that mention the workout and the amount of burnt calories, we will then use the calorie gathered information to perform more tangible analyses. We will then keep track of calorie data, and display the results with a meter presented in the main page of our website to make sure that whenever a user visits the site he/she will be motivated to join the many people around the world who are burning calories and exercising. As the time of the semester permits, we can add many more features to this meter. For instance, classifying the top workouts and what percentage they contribute in terms of burning calories.**