Personal Information

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Skills

I am a final year undergraduate student at the Department of Chemical Engineering, Indian Institute of Technology, Kharagpur, India enrolled in the Bachelor of Technology course. I am also pursuing my minor degree in the Department of Computer Science and Engineering.

Overview of previous work:

I have worked extensively on native PHP and MYSQL based web applications. Some of them are given below:

1. **Intaglio** : Allows admin to design a quiz and the end users are able to take the quiz with the responses available to admin. Also analytics are depicted using Google Chart APIs. The code is not publicly accessible. Screenshots available here : http://pranjalgoswami.in/work/intaglio.html

2. **Moneycare :** Moneycare.co.in is a startup in India that manages financial portfolios of clients online. This involves data entry by the administrators. The clients view the filtered data and analytics are shown using d3 and flot libraries. The code is proprietary, screenshots available at : http://pranjalgoswami.in/work/moneycare.html

3. **Jyukebox:** This webapp is developed by me. It sources the songs from http://songspk.pk. Earlier the webapp crawled the source website using cross-browser AJAX(using Yahoo's YQL). Later I used a python script to download the data to my Mysql database. The webapp captures the usage and gives graphical analytics and recommendations. Users can make playlists online and also share playlists privately and publicly

4. **Erudito:** Erudito is a WPF application I built with a team of 4 student developers. This application allows user to search and browse academic documents/authors/journals. Personalization involves bookmarking and attaching notes to search results and academic papers. The application sources

Google Scholar and Microsoft Academic websites. Details :
http://pranjalgoswami.in/work/erudito.pdf

All above projects were developed using native PHP and MYSQL database. I have made the front-end for each of the projects myself using twitter bootstrap imparting a rich user experience using jQuery.
I have experience in object-oriented programming and writing production code that matches open-source norms.

I have worked for both front-end and optimized back-end development of these web-applications.

Project

ThinkUp provides extensively analyzed data and portrays them to the user in a unique fashion. In the limited time I had to look into the project, I have observed that the application extensively harnesses the abilities of the twitter API. The insights cater interesting facts about their actions on the social network.

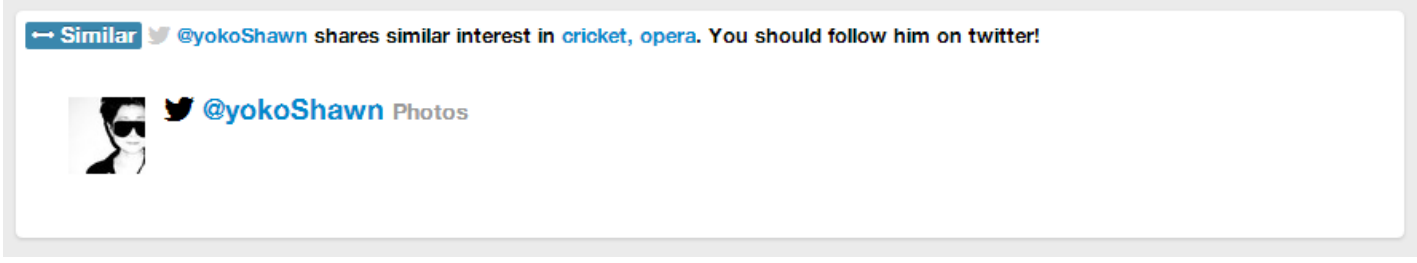
Work on present insights and some new insights:
Currently the webapp performs well for twitter. I intend to enhance the performance of the Facebook plug-in as a lot of users are inactive on twitter but relatively very active on Facebook.
The data comparison of user's activity on different social networks can be an additional insight.

Apart from the algorithms used to extract these insights, the visualization of the data is equally important. Currently the insights show additional data using the Google Chart API. I intend to show more data in form of graphs using d3 as it allows a control of the visuals.

Finding people with similar interests

This feature can identify followers with similar interests and can suggest the user to follow them back.
The '**similar interests**' are obtained by performing topical clustering over documents (here tweets, posts) and obtaining labeled clusters. Standard algorithms like K-means(http://en.wikipedia.org/wiki/K-means_clustering) or other more tunable algorithms offering better semantic matching (e.g. phrase matching) like Lingo (http://project.carrot2.org/publications/osinski-2003-lingo.pdf) could be used.
These cluster labels for each follower can then be matched against the user's clusters and a similarity score could be provided (as simple as number of label keywords matching).
Followers with similarity above a certain threshold would be suggested to follow back.

Use of this feature: Following people with common interests has always been one of the prime reason why people use Twitter. This feature offers the 'follow' suggestions from user's own followers.



Using Google's sentiment analysis

1. To get a response/feedback about a place wants to visit(restaurant/hotel/holiday spot), the application will perform a sentiment analysis on the tweets with #tag of the keyword(place) and then returns a feedback/rating/score for the particular place.
2. For every new tweet of the user, the hash-tags/keywords used will be grabbed and a sentiment analysis will be performed on the tweets of followers/posts by friends containing the similar keywords/hash-tags. The result will show how similar is the user's response with his followers/friends. The keywords will primarily be proper nouns.

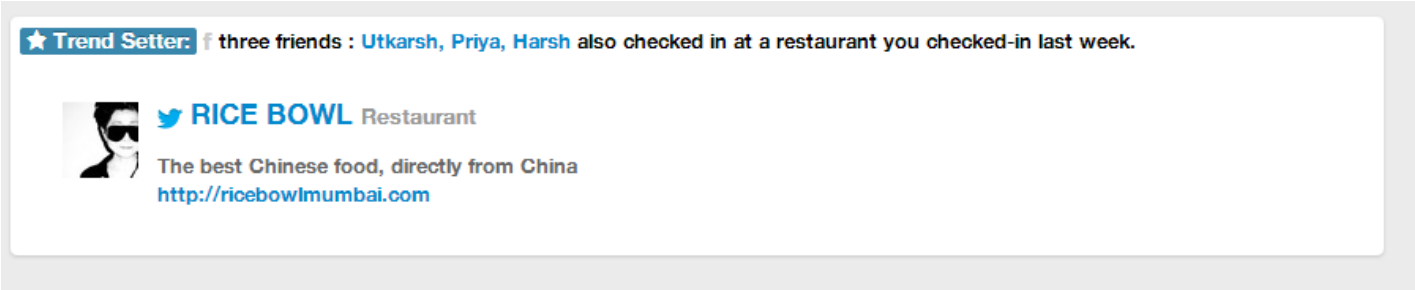
   For Example a user tweets:

   @pranjal-goswami : today chirs #gayle was awesome!!!!

   The application will show the similarity of this tweet with the responses of the followers who tweeted about gayle, using the sentiment analysis

3. Using Sentiment Analysis on the posts and tweets of the user, the mood changes of the user can be gauged. Also, by making a sensitivity analysis of the replies, we can gauge the overall feedback to that tweet or post.
   "Your tweet _____ received a negative response".

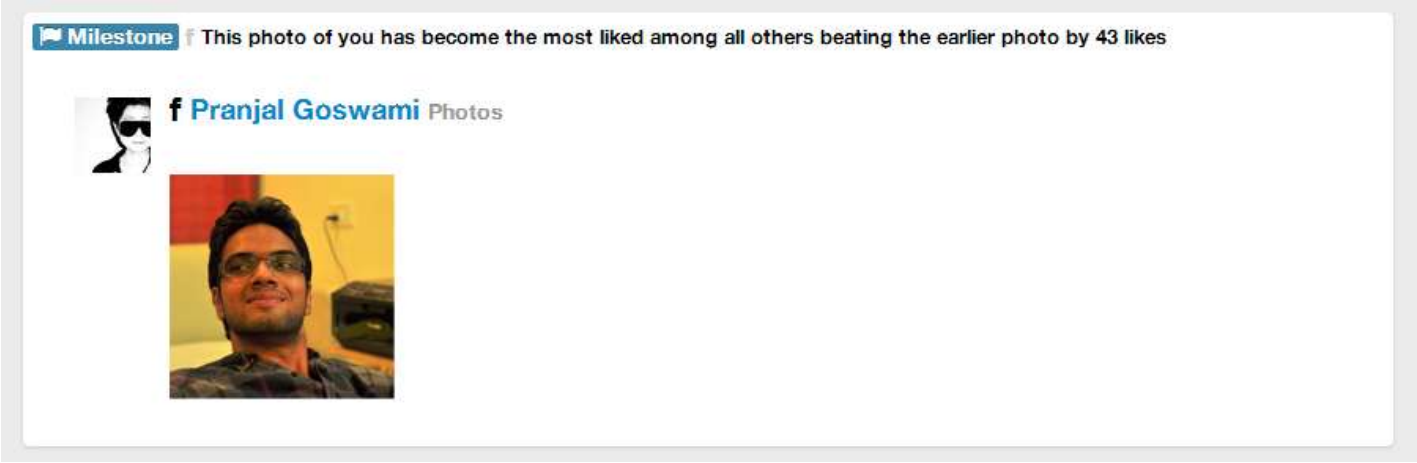
Trend Setter:



Usually, it happens that a person visits a place and tells about it to other people. Many a times, people check-in at the place or post it as a status message. They may also recommend this to their friends. This insight gives an idea of the impact of this positive feedback.
Implementing this feature is easy as check-in data is available using facebook graph API

Milestone:

Apart from upcoming milestones, the user can be notified when a particular milestone is reached. For example a photo reaches more than the present maximum number of likes. Similar is for notes, videos and posts.



Fetch Music and Photographs:
The posts and tweets can be used to grab the interest of the user. Also, the 'interests' from facebook API can be grabbed and stored to fetch related pictures from flickr and music from youtube adding flavor to the present application.

Generating breadcrumb trail
Using the geoLocation data from check-ins using different social network applications, a breadcrumb trail of the user can be visualized using the google map API. This data can be generated weekly and then comparison can be shown as an insight.
"You have checked-in at a lot more places than last week"

I have developed robust web applications using native PHP and MySQL . I have also worked on the user interface of these applications to make them more user friendly. I have a good design sense and have experience in making fluid and lovable designs/visuals. I can use my skills to make better data visualizations. Thus, I consider myself well suited for the project.

Currently, I am an intern market analyst at Deutsche bank, Mumbai, India.
Thus I will be having a overlap period of roughly one week. Apart from that I plan to work on the project on a full time basis.