



**Indira Gandhi Delhi Technical University For Women**  
(Established by Govt. of Delhi vide Act 09 of 2012)  
**Kashmere Gate, Delhi - 110006**

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**Summer Workshop**  
on  
**Online Social Media - Developer's Perspective**  
6th June - 21st July  
2016

**Summary Report**

**Background**

We all use various OSM platforms like Facebook, Twitter, WhatsApp, etc in our daily lives. These OSM platforms are changing the paradigms of socialization. Workshop was aimed to orient participants with the tools, and techniques to understand these OSM platforms from a developer's perspective (as an information technologist). Participants were taught about writing programs in python programming language to collect data from OSMs automatically and analyze for interesting inferences and find actionable information from the collected data.

**Salient Features of Workshop**

**Familiarization with Tools and Technologies:**

Programming Language: Python

Web Frameworks: Django, Ruby on Rails

Databases: MySQL, MongoDB

Social Media APIs: Facebook Graph API, Twitter Search & Streaming API

Python Modules: Matplotlib, Pandas, Scikit Learn, NLTK

Server Side Programming: PHP

JavaScript Libraries : HighCharts

**Understanding related concepts from Conventional Areas of CS/IT:**

Data Mining, Information Retrieval, Text Analysis, Natural Language Processing.

**Project orientation:**

Learning by Doing' pedagogy

Most of the tools and technologies learned through project development

System building: Developing a prototype

## Workshop Format

### 6th June - 17th June: Orientation Phase

Regular classroom sessions in which participants would get a walk through on tools and technologies required for project development. They are introduced to the issues and problems in the domain of Online Social Media (OSM). Complete learning cycle typically involved in any OSM project comprising of data collection, data analysis, data visualization, network analysis and data mining is introduced to participants.

### 18th June - 17th July: Project Development Phase

Participants formed teams among themselves and worked on specific projects in the domain of online social media. Students do most of the work remotely at their home, occasionally guided and monitored in remote mode.

### 18th July - 21st July: Feedback and Evaluation Phase

Participants showed their project outcomes, receive feedbacks, do final project improvements, project evaluations and valedictory.

## Workshop Participants

- Over 100+ students of IGDTUW applied for attending the Workshop.
- Screening had to be done on the basis of multiple factors:-
- past academic performance, skills set, project work and statement of purpose.
- Finally, ~ 50 students got registered for the Workshop.
  - BTech (IT & CSE) 4th Semester
  - BTech (IT & CSE) 6th Semester
  - MCA 2nd Semester
  - MTech (ISM) 2nd Semester

## Projects at Glance

### 1. **Delhi Metro - Where to go.?**

Project aims to create a module that would help to compare two **destinations** where the user wants to go on the basis of Attractions, Geographical Location, Population Density and Sentiments.

### 2. **Finding Youth Events using Online Social Media**

To analyze the online social impact of various government and college events like celebration on Yoga day, fest etc. and give the statistics on their popularity success for future referencing and to improve it further better. Data will be collected from various online social media platforms like twitter, facebook, and various news channel websites.

### **3. Scholarships - What all options are available globally?**

Project aims to collect all the content related to scholarships over social media, perform analysis on the data collected and categorize them as academic related, travel grants, cultural, fashion, women and others. Used naive bayes classifier to identify relevant tweets.

### **4. College Search - What options do I have ?**

The project aims to help students find suitable colleges after their school. The problem is faced by the students after 12th and graduation while choosing the field they are interested in. It is important because the students need to be guided, so that they can make a right decision regarding their future. It will help students to make up their future better.

### **5. Disaster Management**

To analyse tweets/Facebook posts pertaining to a natural disaster so as to classify them as belonging to one of the following classes and display the extent of reach of the disaster : Actionable (AX), Responsive (RS), Innovative (IN), Informative (IF), Emotional (EM) and Spam (SP)

### **6. Traffic Analysis**

To analyse traffic in major metro cities in the country and also to find the areas within a city having most and least traffic and possible causes for the traffic. People posting and tweeting on Facebook Public pages and Twitter about being stuck at places due to heavy traffic or by traffic police updates on both social media sites. This information will be extracted based on twitter hashtags for traffic and various Facebook pages.

### **7. Searching for Jobs and Internships - How to earn ?**

To define the credibility of all posts posted online related to job and internship applications. a) Collecting all such posts from various Facebook groups and pages that offer such Jobs/Internships. b) Collecting the post's content for each of the posts on such groups and pages c) Collecting the likes, comments and their reply threads for all such posts.

### **8. Connecting people for Social Work**

The goal of the project is to find relevant followers for NGO's that is connecting with people who are truly interested in the issue. Collecting tweets based prepared keywords . Collecting tweets based on related #tags.

### **9. Analyzing Red Terror in India**

Leveraging 'Twitter' data to identify areas in India terrorized by Maoists, Naxalites and other anti-social elements and the people who are either sympathizers or actively involved in pro-naxalite activities based on analysis of data obtained from Twitter tweets, retweets and likes.

## **Acknowledgements**

Workshop has been inspired from the course titled 'Privacy and Security in Online Social Media' offered by Prof. Ponnurangam Kumaraguru ("PK") who heads PreCog Research Group ;;it IIIT, Delhi. Pr of. PK delivered the Keynote Address in the workshop remotely over Skype on 6th June which was very received by the student participants, captivated their imagination and later helped them in deciding project problems.

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