**Social Media Prediction (SMP) Challenge**

**Short Blurb**

People are interested in predicting the future, while it helps us, and ultimately companies to make better strategic decisions for future change, trend and plan. The purpose of **SMP Challenge** is to discover novel challenge task based on numerous resources of social media and seek excellent research teams for prediction. Because making predictions for future via increasing ubiquity of social multimedia (photos, video or news) is not only an open challenge of multimedia area but also can bring real value to various of applications and scenarios, such as multimedia recommendation, advertising system, fashion analysis etc. In this year, the task of SMP Challenge 2019 is Temporal Popularity Prediction, which focused on predicting future clicks of new social media posts before they were posted in social media feeds. For each of a new social media post, SMP dataset also provides its relative temporal and multiple multimedia information (e.g. user information, photos, timestamps etc.). The participated teams need to design new algorithm based on understanding and learning techniques, and automatically predict popularity (formulated by indicators about clicks or visits) to achieve better accuracy and correlation evaluation.

**SMP Challenge Website (Temporarily closed for maintenance)**

<https://social-media-prediction.github.io/SMPChallenge2019>

**Website Pages of Social Media Prediction (SMP) Challenge**

**Introduction**

People are interested in predicting the future. For example, which films will bomb or who will win the upcoming Grammy Awards? Making predictions for future via increasing ubiquity of social multimedia (photos, video or news) is not only an open challenge of multimedia area but also can bring real value to various of applications and scenarios, such as multimedia recommendation, advertising system, fashion analysis etc. Predictive analytics is thus a field that has attracted major attention in both of academia and industry.

For prediction, the increasing ubiquity of social media is central to the way to learn and predict about the world. There has been increasing interest in research of exploring rich social facts and knowledge from social multimedia data, such as images, text, video, news etc. The researches of social media prediction covered on several significant areas of multimedia and artificial intelligence, also closely integrated with the research areas of computer vision, machine learning, nature language and human-centered interaction.

The purpose of SMP Challenge is to discover novel challenge task based on numerous resources of social media and seek excellent research teams for prediction. As a joint activity with the research teams from multiple organizations, we are holding on a novel challenge for sociological understanding and predictions, named SMP Challenge (Social Media Prediction Challenge). Meanwhile, we construct a large SMP dataset for social media research, which has social media posts with relative temporal and multiple multimedia information (e.g. user information, photos, timestamps etc.).

**Task Description**

The challenge will focus on temporal prediction of social media, and the topic is **Temporal Popularity Prediction**. Meanwhile, we are open for innovative self-proposed topics, which related with new predictive problem in social media.

## Task: Temporal Popularity Prediction

The task is focused on predicting the impact of new social media posts (photos, videos or news) before they were shared on social media. Given a new post with temporal multimedia context of a publisher, the popularity computed by the normalized score of clicks or visits of the post (e.g., tweet count for Twitter, view count for Flickr, etc).

The contestants are asked to develop their temporal prediction models based on the SMP dataset provided by the Challenge (as training data), plus possibly additional public/private data, to address one or both of the given tasks. For the evaluation purpose, a contesting system is asked to produce prediction results of popularity. The accuracy will be evaluated by pre-defined quantitative evaluation. The contestants need to introduce their systems and datasets in the conference.

**Leadboard**

|  |  |  |  |
| --- | --- | --- | --- |
| **#Rank** | **Team Name** | **SR** | **MAE or MSE** |
| 1 | \*\*\*\* | 0.3234 | 0.5638 |

**Dataset**

**Temporal Popularity Image Collection (TPIC)**

<https://github.com/social-media-prediction/TPIC2017>

The SMP datasets TPIC2017 contains 680K photos, which collected from Flickr (a photo sharing platform) and corresponding anonymized photo-sharing records ranges of 3 years. TPIC is a multi-faceted data collection, which contains photo image, user profile and photo metadata. For each task, we split the data with time-order, resulting in 90% for training and 10% for testing. The tables below show the statistics of TPIC2017.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Dataset** | **#Post** | **#User** | **Temporal Range**  **(Years)** | **Avg. Title Length** | **Avg. Tag Count** | **Avg. Description Length** | **Avg. Views** |
| TPIC2017 | 680K | 80K | 3 | 20 | 9 | 114 | 131 |

**Evaluation Criteria & Ranking**

The evaluation provided here can be used to obtain performances on the testing set of SMP. It contains multiple common metrics, including *Spearman’s Rho (SR)*, *Mean Absolute Error (MAE)*, *Mean Squared Error (MSE)*.

The ranking for the competition for each year is based on quantitative evaluation, respectively. Specifically, a rank list of teams is produced by sorting their scores on each objective evaluation metric, respectively. The final rank of a team is measured by combining its ranking positions in the three ranking list for respective task and defined as:

*R*(team) = *R*(team)@SR + *R*(team)@MAE + *R*(team)@MSE

where *R*(team) is the rank position of the team on a particular metric, e.g., if the team achieves the best performance in terms of *Spearman’s Rho*, then *R*(team)@SR is "1". The smaller the final ranking, the better the performance.

**Possible Timeline**

* March 20, 2019: Dataset available for download (training set)
* May 25, 2019: Test set available for download
* June 5, 2019: Results submission
* June 6, 2019: Objective evaluation and human evaluation
* June 15, 2019: Evaluation results announce
* July 8, 2019: Paper submission deadline (please follow the instructions on the main conference website)

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