

Exploiting Temporal and Semantic Information for
Microblog Retrieval through Query Expansion and
Reranking Approaches

(クエリの拡張と再順位付けアプローチによるマイクロ
ブログ検索のための時間的および意味的情報の活用)

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1 Inline Text Manipulation

Microblog platforms such as “twitter”, *sina weibo*, etc. are rapidly moving towards a platform for sample text user-generated information production and consumption. Among the several microblog services, #twitter has become the most popular. The real-time nature of twitter plays an **important role during a disaster period**, such as earthquakes, \wildfires, and so on. This is because the user-generated twitter posts during such events might be useful to serve the situational information needs ($\approx 59\%$ & 89%). To use underscore it is $X_2 4^{th}$ ©2021. **colored text**

2 Itemize and Enumerate

2.1 The General Type of Itemize

- Explore the image.
- Explore the text.
- Explore the video.
- Explore the sound.
- Create the multimodal data.

2.2 Using the Special Symbol for Item Label

- Explore the image.
- * Explore the image.
- ◇ Explore the text.
- Explore the video.
- ★ Explore the sound.
- Create the multimodal data.

2.3 Numbered Type Itemize

1. Explore the image.
2. Explore the text.
3. Explore the video.
4. Explore the sound.
5. Create the multimodal data.

2.4 English alphabetic Type Itemize (Lowercase)

- A Explore the image.
- B Explore the text.
- C Expore the video.
- D Explore the sound.
- E Create the multimodal data.

2.5 Roman Numbered Type Itemize (Lowercase)

- i Explore the image.
- ii Explore the text.
- iii Expore the video.
- iv Explore the sound.
- v Create the multimodal data.

2.6 Roman Numbered Type Itemize (Uppercase)

- I Explore the image.
- II Explore the text.
- III Expore the video.
- IV Explore the sound.
- V Create the multimodal data.

2.7 Reducing Space between Items

1. Explore the image.
2. Explore the text.
3. Expore the video.
4. Explore the sound.
5. Create the multimodal data.

2.8 Reducing Space between Items and Provide Special Item Label

- * Explore the image.
- * Explore the text.
- * Expore the video.
- * Explore the sound.
- * Create the multimodal data.

2.9 Reducing Space between Items and Provide Romanized Item Label

- i Explore the image.
- ii Explore the text.
- iii Expore the video.
- iv Explore the sound.
- v Create the multimodal data.

2.10 Reducing Space between Items and Provide Numeric Item Label

- 1 Explore the image.
- 2 Explore the text.
- 3 Expore the video.
- 4 Explore the sound.
- 5 Create the multimodal data.

2.11 Adding Specific Character with Each Numeric Item Label

- B1 Explore the image.
- B2 Explore the text.
- B3 Expore the video.
- B4 Explore the sound.
- B5 Create the multimodal data.

2.12 Numeric Item Label with Bracket

- (1) Explore the image.
- (2) Explore the text.
- (3) Expore the video.
- (4) Explore the sound.
- (5) Create the multimodal data.

2.13 Numeric Item Label with Dot

1. Explore the image.
2. Explore the text.
3. Expore the video.
4. Explore the sound.
5. Create the multimodal data.

2.14 Alphabetic Item Label with dot

- a. Explore the image.
- b. Explore the text.
- c. Expore the video.
- d. Explore the sound.
- e. Create the multimodal data.

2.15 Alphabetic Item Label with dot

- A. Explore the image.
- B. Explore the text.
- C. Expore the video.
- D. Explore the sound.
- E. Create the multimodal data.

2.16 Romanized Item Label with dot

- i. Explore the image.
- ii. Explore the text.
- iii. Expore the video.

2.17 Romanized Item Label with dot

- I. Explore the image.
- II. Explore the text.
- III. Expore the video.
- IV. Explore the sound.

3 Mathematical Equation and Expression

$$e_t = h_t w_a \quad (1)$$

$$a_t = \frac{\exp(e_t)}{\sum_{i=1}^T \exp(e_i)}$$

$$v = \sum_{i=1}^T a_i h_i$$

$$P(m^{(i)}, n^{(i)}) = \sum_{j=1}^k 1\{n^{(i)} = j\} \log(n_j^{\sim(i)})$$

$$\begin{aligned} \text{Combined Span} = & \text{Span}[\text{index}[1]] \cup \\ & \text{Span}[\text{index}[1]] \cup \\ & \text{Span}[\text{index}[1]] \end{aligned}$$

$$\begin{aligned} R_j : & \text{if } x_1 \text{ is } A_{j1} \text{ and/or } \dots\dots\dots x_n \text{ is } A_{jn} \\ & \text{then } \text{Class} = C_j, \quad j = 1, \dots\dots\dots, N \end{aligned}$$

3.1 Nested LSTMs (NLSTMs)

Nowadays, LSTM based deep learning models are the most popular choice for sequential tasks. In our model, we employ the state-of-the-art nested LSTMs (NLSTMs) model where the LSTM memory cells selectively read and write necessary long-term information through accessing their inner memory. Though LSTM is employing $c_t^{outer} = f_t \odot c_{t-1} + i_t \odot g_t$ to estimate it's outer memory cell value, NLSTMs use the concatenation $(f_t \odot c_{t-1}, i_t \odot g_t)$ as an input to an inner LSTM (or NLSTM) memory cell, and set $c_t^{outer} = h_t^{inner}$. Such mechanism helps the NLSTMs to operate on longer time-scales thus capture the contextual information effectively.

4 Figure Inclusion

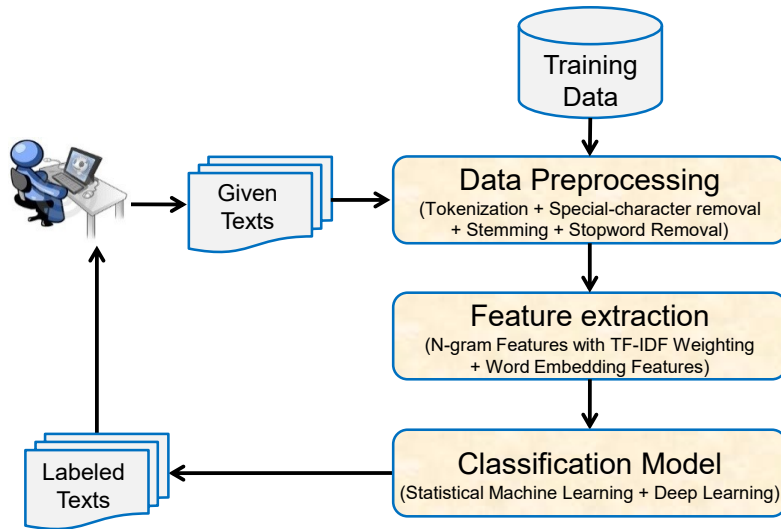


Figure 1: Proposed framework.

Figure 2: Sample of positive (left) and negative (right) sentiment bearing images.

5 Table

Now, we illustrate the different types of tables. See the long table illustration from here <https://www.overleaf.com/latex/examples/a-longtable-example/xxwzfxkxxjmc>. Other types of tables are illustrated below:

Table 1: A sample table.

Col1	Col2	Col3	Col4
1	6	87837	–
2	7	78	5415
3	545	778	7507
4	545	18744	7560

Team Name	F1-Score
HITSZ-HLT9 (1st)	0.7083028253
hitmi&t (3rd)	0.6984762534
IITKDetox (9th)	0.6895352367
CSECUDSG (21st)	0.6795264755
mnfourka (45th)	0.6581458018
ST_TSRResearch (64th)	0.6133591537

Table 2: Comparative performance analysis.

Table 3: Comparative performance analysis against the state-of-the-art.

Methods	Any-Type (Micro Avg.)			
	Precision	Recall	F1 Score	Accuracy
Proposed Method	0.4504	1.0000	0.6210	0.4504
<i>Top 5 Performing Teams in TRECIS-2018</i>				
cbnuS2	0.4559	0.7780	0.5749	0.4213
KDEIS4_DM	0.3914	0.9856	0.5603	0.3908
umdhcilmfasttext	0.4534	0.7260	0.5582	0.4022
Participant Median	0.3978	0.6165	0.4775	0.3385

6 Pseudocode/Algorithm Inclusion

Algorithm 1: How to write algorithms

Input: Input:
Output: Output:
Result: Write here the result
initialization;
while *While condition* **do**
 instructions;
 if *condition* **then**
 instructions1;
 instructions2;
 else
 instructions3;
 end
end

$i \leftarrow 10$
if $i \geq 5$ **then**
 $i \leftarrow i - 1$
else
 if $i \leq 3$ **then**
 $i \leftarrow i + 2$
 end if
end if

7 External PDF Pages Inclusion

8 Footnote and Citation/References

Some sample texts to illustrate the use of footnote¹. Also we can use the url reference as footnote².

To add a reference of a research paper, we need to collect bibtex from google scholar and put this bibtex in the *.bib file. Then, we can add the reference as follows: (Moniz and Krueger, 2017) (Kopka and Daly, 1995).

9 Miscellaneous

we publicly release the dataset for future research purposes at the following link: <https://git.io/JkW6V> or use the expanded URL³

10 Illustration of Section

10.1 This is Subsection:

10.1.1 This is Subsubsection:

11 Domain Specific Template Manipulation

IEEE Template <https://www.ieee.org/conferences/publishing/templates.html>.

¹Footnte sometimes used as a provider of additional information

²<https://github.com/nowshedcu/Personality-Traits-Detection-in-Bangla>

³<https://github.com/nowshedcu/Personality-Traits-Detection-in-Bangla>

References

H Kopka and PW Daly. 1995. A guide to $\{\text{\LaTeX}\}$ -document.

Joel Ruben Antony Moniz and David Krueger. 2017. Nested lstms. In *Asian Conference on Machine Learning (ACML)*, pages 530–544. Springer.