Workshop on LaTex for Academic, Technical, and Professional Writing

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1 Inline Text Manipulation

This is my first LaTeX document.

Microblog platforms such as "twitter", *sina weibo*, etc. are rapidly moving towards a platform for \informal \informal 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.

Suppose we are given a rectangle with side lengths $(x + 1)$ and $(x + 3)$. Then the equation

$$A = x^2 + 4x + 3$$

represents the area of the rectangle.

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.

▶ Expore 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 Explore the video.

d Explore the sound.

e Create the multimodal data.

2.5 English alphabetic Type Itemize (Uppercase)

A Explore the image.

B Explore the text.

C Explore the video.

D Explore the sound.

E Create the multimodal data.

2.6 Roman Numbered Type Itemize (Lowercase)

i Explore the image.

ii Explore the text.

iii Explore the video.

iv Explore the sound.

v Create the multimodal data.

2.7 Roman Numbered Type Itemize (Uppercase)

I Explore the image.

II Explore the text.

III Explore the video.

IV Explore the sound.

V Create the multimodal data.

2.8 Reducing Space between Items

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

2.9 Reducing Space between Items and Provide Special Item Label

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

2.10 Reducing Space between Items and Provide Romanized Item Label

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

2.11 Reducing Space between Items and Provide Numeric Item Label

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

2.12 Adding Specific Character with Each Numeric Item Label

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

2.13 Numeric Item Label with Bracket

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

2.14 Numeric Item Label with Dot

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

2.15 Alphabetic Item Label with dot

a. Explore the image.
b. Explore the text.

c. Explore the video.
d. Explore the sound.
e. Create the multimodal data.

2.16 Alphabetic Item Label with dot

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

2.17 Romanized Item Label with dot

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

2.18 Romanized Item Label with dot

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

2.19 Circledast label

⊛ Explore the image.

⊛ Explore the text.

⊛ Explore the video.

⊛ Explore the sound.

3 Mathematical Equation and Expression

$$\int_{\pi}^{-\pi} f(\theta)\, d\theta \tag{1}$$

$$e_t = h_t w_a \tag{2}$$

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

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

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

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

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

$$\underset{f_i}{argmax}((h_i, f_i))$$
$$\underset{f_i}{\text{argmax}}((h_i, f_i))$$

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

- Have to use figure in pdf format for scalabilty and make sure that the font is embedded in that pdf to make sure the font can be seen even if the font is not available in another pc

- Save as pdf from pptx, while at it select 'option' and select ISO

- Floating Elements: Both tables and figures in LaTeX are "floats," meaning LaTeX tries to place them in optimal positions based on page layout and available space. The !htb placement options (h for "here", t for "top", b for "bottom", and ! for "override LaTeX's preference") give LaTeX some flexibility to move floats around.

- Space Constraints: If there isn't enough space to place the figure where you specified (e.g., at the top of a page), LaTeX might push it to a later page while placing the table earlier, depending on available room.

- Ordering Floats: LaTeX tries to optimize the page layout based on what fits best. Even if you specified !htb for both the table and figure, the table might be positioned before the figure if LaTeX determines that this results in a better page flow.

- Use the [H] option (from the float package) to enforce that the float appears exactly where it is defined in the code.

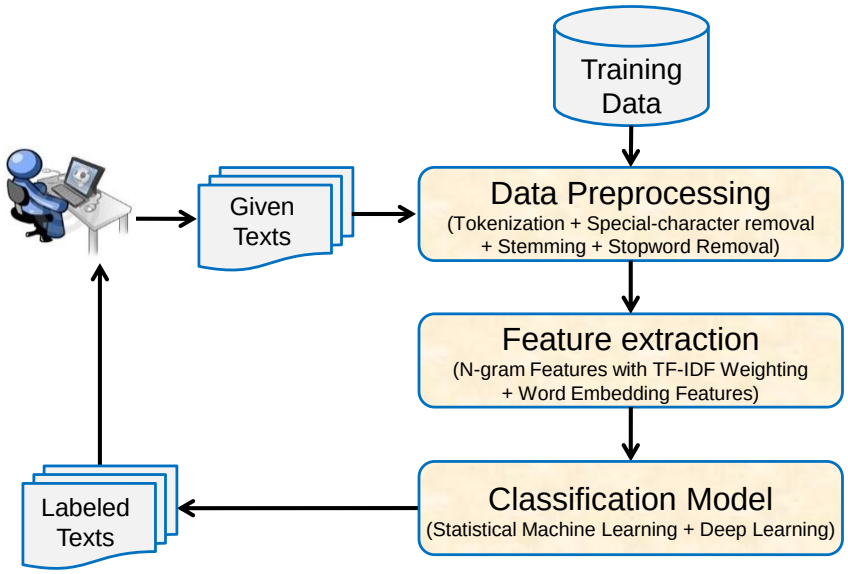

Figure 1: Proposed framework.

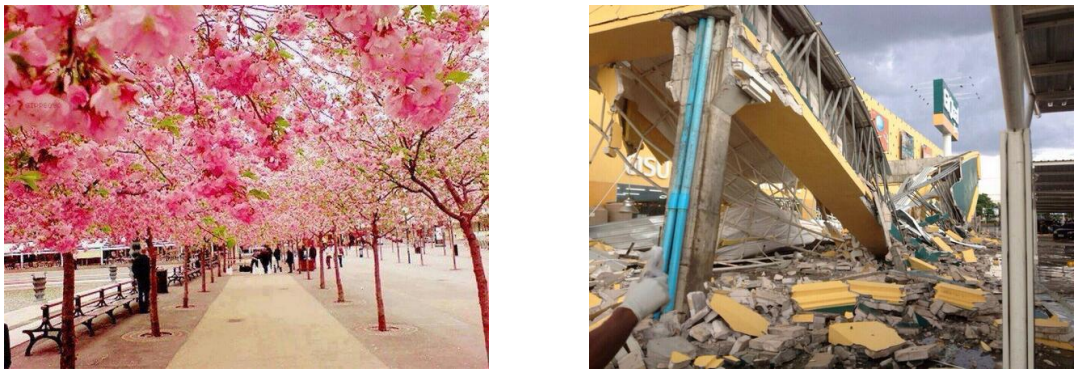

Figure 2: Sample of positive (left) and negative (right) sentiment bearing images.

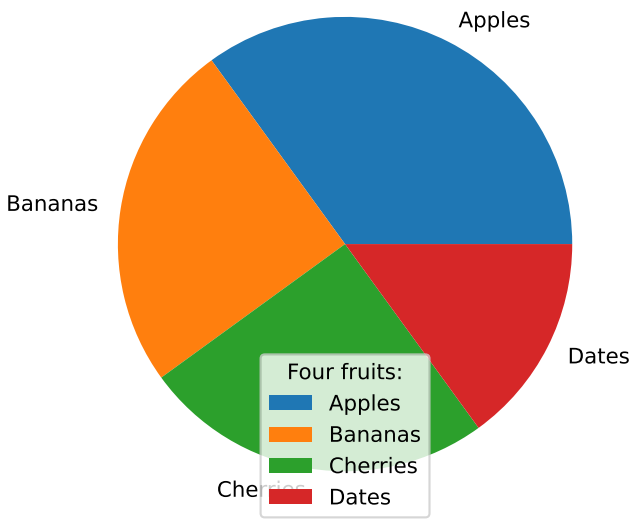

Figure 3: Pie Chart

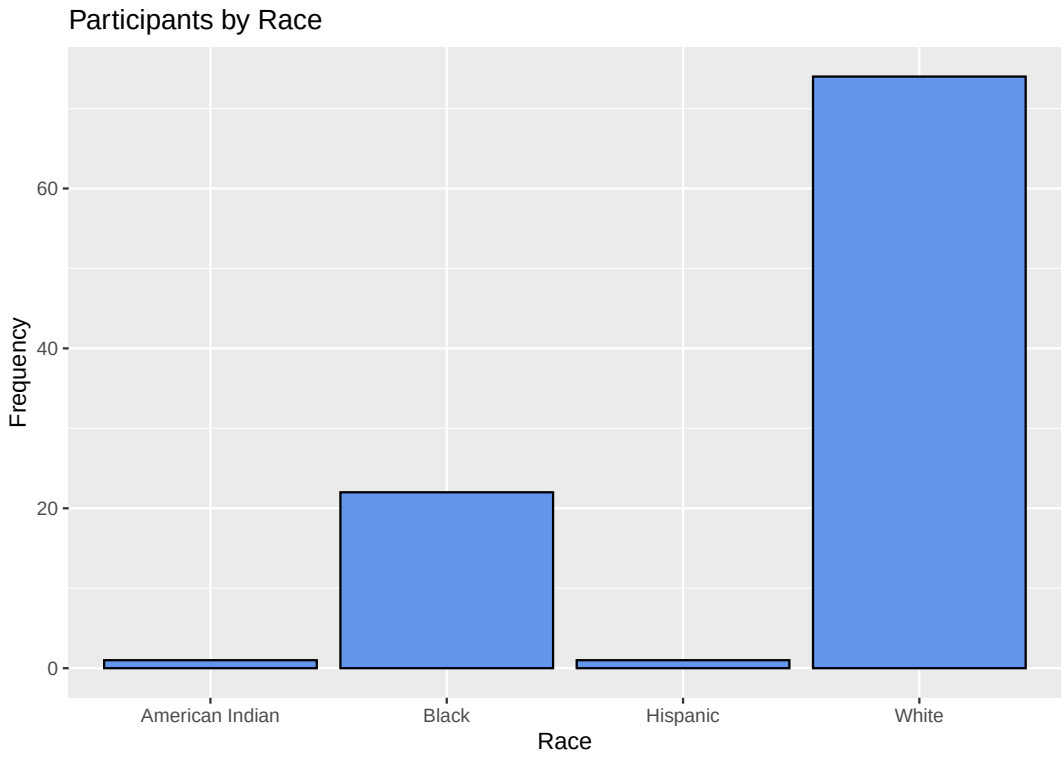

Figure 4: Bar Chart

5 Table

Now, we illustrate different types of tables.

Table 1: A sample table.

Col1	**Col2**	Col3	Col4	Col5	Col6
1	66	98	75	11	66
2	67	257	97	77	23