

INDIAN INSTITUTE OF TECHNOLOGY,BOMBAY

My Diary

by

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Your Roll No

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Contents

List of Figures	ii
List of Tables	iii
1 My classroom learning	1
1.1 Math class	1
1.2 Counting sort	2
2 Watched Cricket match	3
3 Miscellaneous activity	5
3.1 My semester expense	5
3.2 My favorite recipe	6
3.3 Some important research ideas.	6

List of Figures

2.1	Line graph of India Vs Australia	3
2.2	Bar graph of India Vs Australia	4
3.1	Stuff preparation of Aloo Paratha	6

List of Tables

3.1	My semester expanse	5
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Chapter 1

My classroom learning

Dear Diary,

It was a wonderful experience for me to lot important things in the class. I would like to share some the important things.

1.1 Math class

The equation of Latent Dirichlet allocation is very helpful in natural language processing for modelling a generative statistical model. The equation of the model is shown below :-

$$p(\beta, \theta, z, w | \alpha, \eta) = \prod_{i=1}^K p(\beta_i | \eta) \prod_{d=1}^D p(\theta_d | \alpha) \left(\prod_{n=1}^N p(z_{d,n} | \theta_d) p(w_{d,n} | \beta_{1:K}, z_{d,n}) \right) \quad (1.1)$$

Also the formula of cumulative distribution function in case of uniform probability measure is :-

$$F(x) = \begin{cases} 0, & \text{if } x < a \\ \frac{x-a}{b-a}, & \text{if } a \leq x \leq b \\ 1, & \text{if } x > b \end{cases} \quad (1.2)$$

1.2 Counting sort

Counting sort is one of the nice algorithm which is not comparison based sorting. Below is the counting sort algorithm :-

Algorithm 1 Counting Sort

```

1: procedure COUNTING-SORT( $A, B, k$ )
2:   Let  $C[0, \dots, k]$  be a new array
3:   for  $i=0$  to  $k$  : do
4:      $C[i] = 0$  ▷ Initialization step
5:   for  $j=1$  to  $A.length$  or  $n$  : do
6:      $C[A[j]] = C[A[j]] + 1$  ▷ Maintaining count
7:   for  $i=1$  to  $k$ : do
8:      $C[i] = C[i] + C[i - 1]$ 
9:   for  $j=n$  or  $A.length$  down to  $1$ : do
10:     $B[C[A[j]]] = A[j]$ 
11:     $C[A[j]] = C[A[j]] - 1$ 

```

Chapter 2

Watched Cricket match

India and Australia match is always wonderful to watch. While Australia was 170/10 in 17.4 over, India scored 172/4 in 15.5 over and won by 6 wickets.

Below is the line graph.

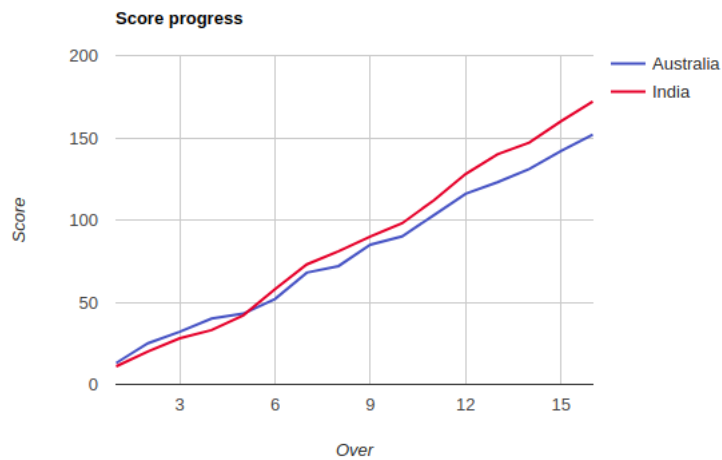


FIGURE 2.1: Line graph of India Vs Australia

Also the bar graph was like shown in figure 2.2 :-

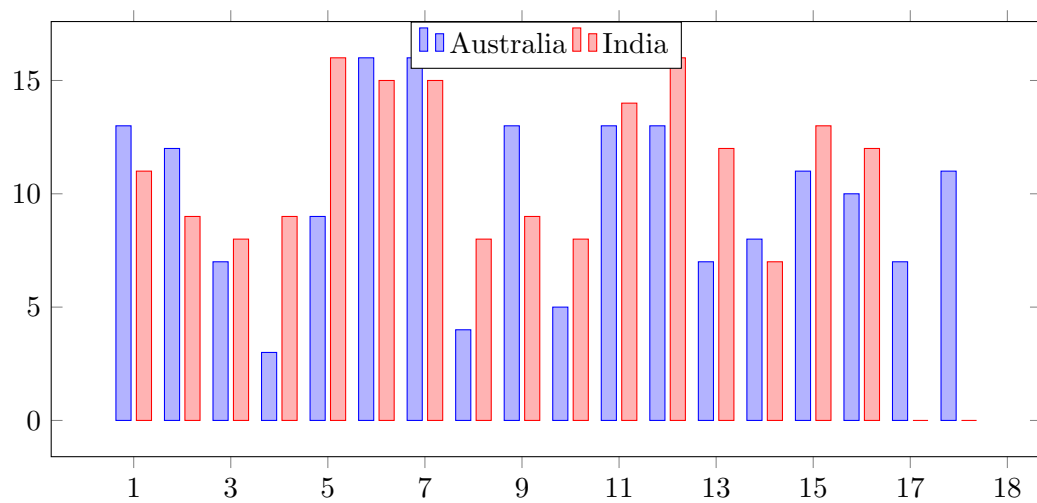


FIGURE 2.2: Bar graph of India Vs Australia

Chapter 3

Miscellaneous activity

3.1 My semester expense

I want to prepare my semester expense falling mainly into below categories:-

Semester fee This include my tution fee

Mess expense My mess fee.

Stationary My stationary requirement

Transportation Mainly include my home trip

Entertainment Very less, because I am student of IIT Bombay

Miscellaneous Other important things

Below table describe my expanse:-

Per semester Expanse	
Expanse due to	Amount
Semester fee	18000
Mess expense	20000
Stationary	7000
Transportation	9000
Entertainment	5000
Miscellaneous	4000

TABLE 3.1: My semester expanse

3.2 My favorite recipe

I like to learn new cooking item. I went through recipe of preparing stuff for aloo paratha. Below is the recipe.

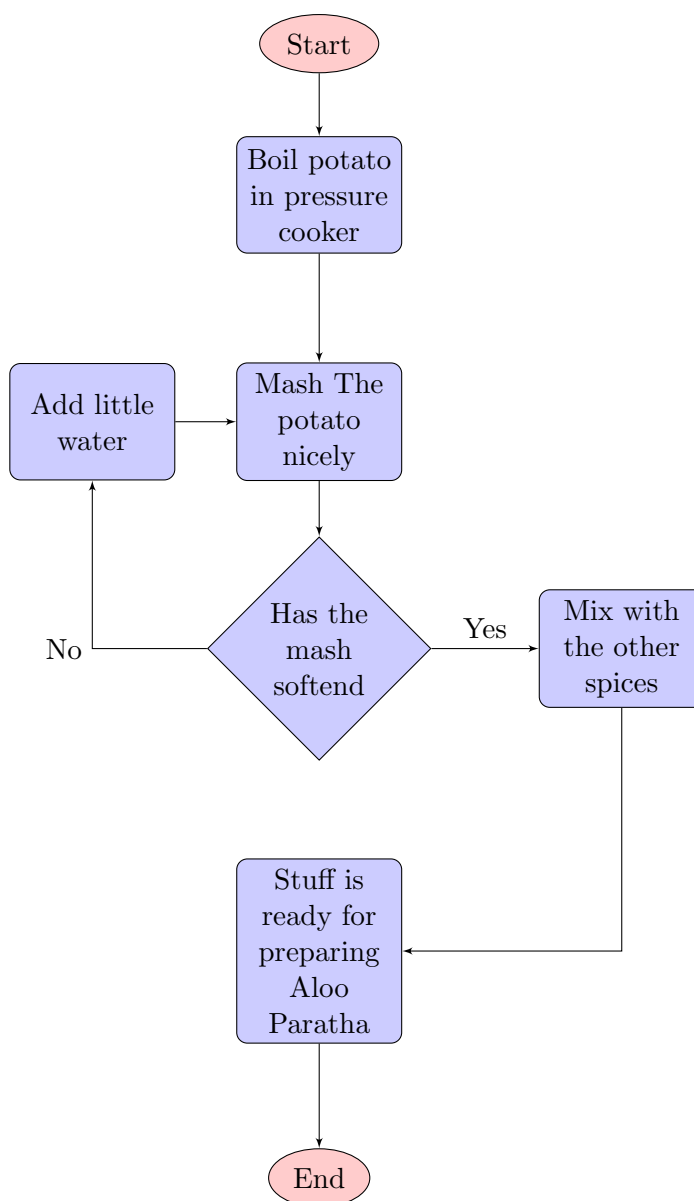


FIGURE 3.1: Stuff preparation of Aloo Paratha

3.3 Some important research ideas.

Paper [1] describes how word embedding helps in sarcasm detection by augmenting the word embedding-based features to the sets of features of sarcasm. Similarity score values returned by word embeddings, are of two categories:- similarity-based (where

we consider maximum/minimum similarity score of most similar/dissimilar word pair respectively), and weighted similarity-based (where we weight the maximum/minimum similarity scores of most similar/dissimilar word pairs with the linear distance between the two words in the sentence).

Paper [2] is a compilation of past work in automatic sarcasm detection. The three milestones observed in the research so far: semi-supervised pattern extraction to identify implicit sentiment, use of hashtag-based supervision, and incorporation of context beyond target text.

Bibliography

- [1] Joshi, Aditya, et al. "Are Word Embedding-based Features Useful for Sarcasm Detection?." arXiv preprint arXiv:1610.00883 (2016).
- [2] Joshi, Aditya, Pushpak Bhattacharyya, and Mark J. Carman. "Automatic sarcasm detection: A survey." ACM Computing Surveys (CSUR) 50.5 (2017): 73.