MATH 6380Q Project 1 Peer Review

07. Ziming WU, Feng HAN, and Song LIU. Whether and why are people feeling happy? Mining Affective Events Based on Text-based Information.

[ Reviewer 1 ]

1. Whether and why are people feeling happy? Mining Affective Events Based on Text-based Info.

Summary:

In this study, CNNs were built in an attempt to characterize and classify happiness computationally.

Strength of the project:

It is a very interesting topic, and many usages of advanced NLP algorithms.

Weakness of the project:

The entire project was not pleasantly and clearly presented, there exist many missing logical links between the Methodologies and Discussion parts.

|  |  |
| --- | --- |
| Evaluation on Clarity and quality of writing (1-5): | 2 |
| Evaluation on Technical Quality (1-5):  | 3 |
| Overall rating:  | 2 |
| Confidence on your assessment: | 2 |

[ Reviewer 3 ]

The authors used deep learning method (i.e. Cruz-Affect) to help understand how people express their happy moments based on HappyDB dataset.

The research topic is quite interesting and the work is rather complicated since the dataset made of strings (natural language).

For the methodology part, something is hard to follow for people in other fields.

Apart from the methodology part, other sections are clearly to follow. Besides, in discussion/conclusion, they mentioned that ‘Bert can provide better semantic embedding compared to GloVe’. However, in results section, we could only see the results of Bert. We need more details about GloVe.

The results are technically sound. The claims are mostly good apart from the missing GloVe based results. Therefore, it is not so convincing for the claim ‘Bert can provide better semantic embedding compared to GloVe’. The authors might lack the evaluation on the weakness of the methods here. References on the models adopted in the project should be cited.

The overall rating is 4 and my confidence is 2.

[ Reviewer 4 ]

This report performs good CNN analysis on text data. However it seems that it needs more connection with what we have learnt on the class.

Evaluation on Clarity and quality of writing: 5

Evaluation on Technical Quality:3

Overall rating:3

Confidence on your assessment:2

[ Reviewer 5 ]

Summary: In this project, the author uses the power of Deep Learning method: Cruz-Affect in terms of their effectiveness of extracting features for the datamining of HappyDB dataset.

Strengths: Use CNN.

Weakness: PCA can be more utilized.

Evaluation on Clarity and quality of writing: 3.

Evaluation on Technical Quality: 3.

Overall rating: 3

Confidence on your assessment: 2

5.3 Score

5.3.1 Clarity and Quality of Writing

The arrangement and structure of the poster is great, I believe they have spent a lot of effort on this report. I didn’t find any typo. I will give them 5/5 on this aspect.

5.3.2 Technical Quality

Reasonable steps for getting the analysis conclusion. Each plot are useful and construct a great explanation of their work. It’s good that they mentioned the future improvement of their work. If the conclusion can be deeper this report will be much better. I will give them 4/5 on this aspect.

5.3.3 Overall

The overall score for this poster is 4.5/5.

[ Reviewer 7 ]

* **Summary of this report:** In this report, the power of deep learning method is used to analyze the HappyDB dataset. This report demonstrates the possibility of characterizing happiness computationally.
* **Describe the strengths of the report:** The topic of this report is very interesting. The methodologies are reasonable and well organized. The deep learning Convolutional Neural Networks (CNN) classifier is used for the classification of HappyDB dataset, which is novel and reasonable.
* **Describe the weaknesses of the report:** The discussions of the results are a little few. Thus, I am a little confused about the histogram in their report. Some discussions should be added to make readers understand better.
* **Evaluation on Clarity and quality of writing (1-5): 5**

**The writing is good except a little typo:** This study demonstrates the possibility of characterizing happiness computationally, which can shed light on the understanding of what behaviours (behaviors) make people happy.

* **Evaluation on Technical Quality (1-5): 5**

The deep learning method used in this report is highly technical.

* **Overal ratings: 5**
* **Confidence on your assessment: 3**

I am not familiar with the method using in this report. So my assessment may be wrong.

 [ Reviewer 8 ]

• Summary of the report.

Use CNN to analyze text data.

• Describe the strengths of the report.

Clearly written.

• Describe the weaknesses of the report.

Perhaps this is more suitable to be a project for a deep learning course? Not this course. I find no relevant methods that are discussed in class in this report.

• Evaluation on Clarity and quality of writing (1-5): Is the report clearly written? Is there a good use of examples and ﬁgures? Is it well organized? Are there problems with style and grammar? Are there issues with typos, formatting, references, etc.? Please make suggestions to improve the clarity of the paper, and provide details of typos.

4

• Evaluation on Technical Quality (1-5): Are the results technically sound? Are there obvious ﬂaws in the reasoning? Are claims well-supported by theoretical analysis or experimental results? Are the experiments well thought out and convincing? Will it be possible for other researchers to replicate these results? Is the evaluation appropriate? Did the authors clearly assess both the strengths and weaknesses of their approach? Are relevant papers cited, discussed, and compared to the presented work?

3? (hardly related)

• Overall rating: (5- My vote as the best-report. 4- A good report. 3- An average one. 2below average. 1- a poorly written one).

2? (hardly related)

• Conﬁdence on your assessment (1-3) (3- I have carefully read the paper and checked the results, 2- I just browse the paper without checking the details, 1- My assessment can be wrong)

2

[ Reviewer 9 ]

1. **Summary**

The authors used Cruz-Affect in terms of their effectiveness of extracting features for the datamining of HappyDB dataset.

1. **Strength of the report**

The objective of the task is clearly stated, and the methods are detailed stated

1. **Weakness of the report**

The analysis using CNN model is not sufficient. The report focused more on the algorithm and the results relating the original data is kind of unclear.

1. **Evaluation of clarity and quality of writing**

The report is clearly written and well organized. The figures are clearly explained. No obvious problems of the style, grammar, typo, and formatting are examined.

1. **Evaluation on technical quality**

The results are technically sound and no obvious flaws in the reasoning are found. However, this topic is kind of beyond the range of PCA analysis.

1. **Overall rating**

An overall rating of 3 is given.

1. **Confidence on your assessment**

2- I just browse the paper without checking the details

[ Reviewer 10 ]

*Summary:*

Used the deep learning method Cruz-Affect to classify the HappyDB dataset.

*Strength:*

The model itself seems complicated and have better performance than 3-layer CNN and ResNet.

*Weakness:*

Not related to dimension reduction.

*Evaluation on Clarity and quality of writing (1-5): 3*

The course code may be better replaced by this course, that is, CSIC5011. (Do not know if the course has another course code of MATH6380J)

Do not know the difference of Cruz-Affect and ResNet according to this poster, since the result showing the CNN and ResNet performance comparison.

*Evaluation on Technical Quality (1-5): 3*

The model itself may be fancy, but it’s difficult to find out how dimension reduction related to this poster. And it’s named a different course code, maybe it’s not for this course.

*Overall rating (1-5):2*

*Conﬁdence on your assessment (1-3): 2*

[ Reviewer 11 ]

Summary: This report uses CNN to do classification on HappyDB dataset.

Strengths: They have a very interesting problem and the methodologies are very clear.

Weaknesses: Lack of analysis.

Writing: (4) The report is well-organized. But some terminologies are used without any explanation, for example, 'Bert'.

Technical Quality: (3) They explain the method clearly. But it is hard to know how they get the conclusion 'Bert can provide better semantic embedding compared to GloVe in terms of encoding happiness information'. It seems that there is no comparison between Bert and GloVe.

Overall rating: (3)

Confidence on my assessment: (2)

[ Reviewer 12 ]

**Summary:** This project works on an interesting dataset HappyDB. By building a tuned CNN, it tries to make classification predictions about whether people are happy based on the sentences given. They also compare their own CNN model with other mature models and shows it is possible to distinguish people’s emotion based on texts.

**Strengths:** The topic is quite interesting. Rather than using RNN, they choose CNN to analyze the textual dataset. It overcomes the difficult tasks about tuning the CNN model and obtains fairly good results. This research is quite close to our daily life and reveals more possibilities of machine learning methods.

**Weaknesses:** This work mainly focuses on the prediction behavior of the CNN model on the textual dataset. But the title also includes information like why people are feeling happy which attracts my attention most. In the poster I cannot get a clear understanding about the reason why people are happy based on their analysis. And I think it would be better if they pay more attention to the explanation part which would make the work more meaningful.

**Evaluation on Clarity and quality of writing:** 4

**Evaluation on Technical Quality:** 5

**Overall rating:** 5

**Confidence on your assessment:** 2