Whether and why are people feeling happy?

Mining Affective Events Based on Text-based Information

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Background

Happiness Science is a field of positive psychology that focuses on understanding what behaviours make people happy in a sustainable way. Statistical and machine learning methods have opened a new door for understand how people express their happy moments.
In this project, we use the power of Deep Learning method: Cruz-Affect in terms of their effectiveness of extracting features for the datamining of HappyDB dataset.

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Introduction

Figure: Demonstration of HappyDB dataset

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Methodologies

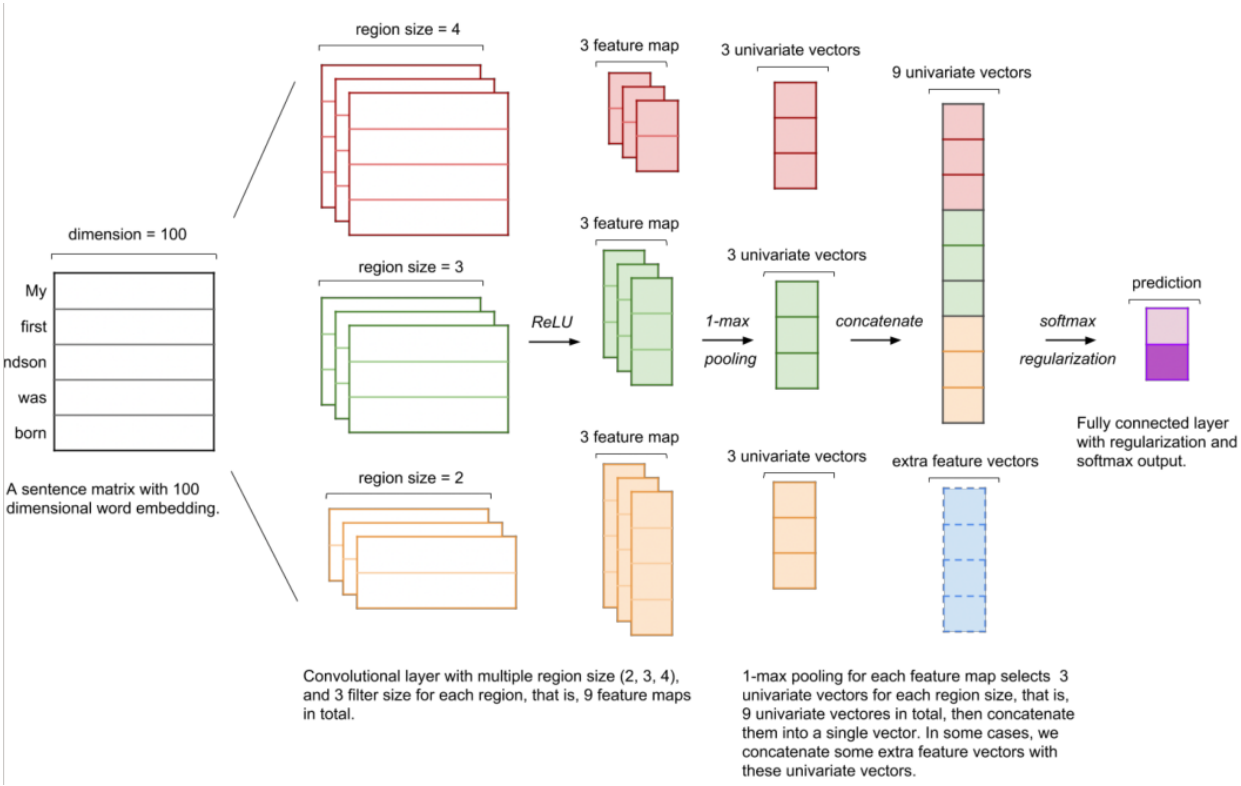

Figure: A Diagram for the CNN model with region size (2, 3, 4) and filter size 3 for a single sentence.

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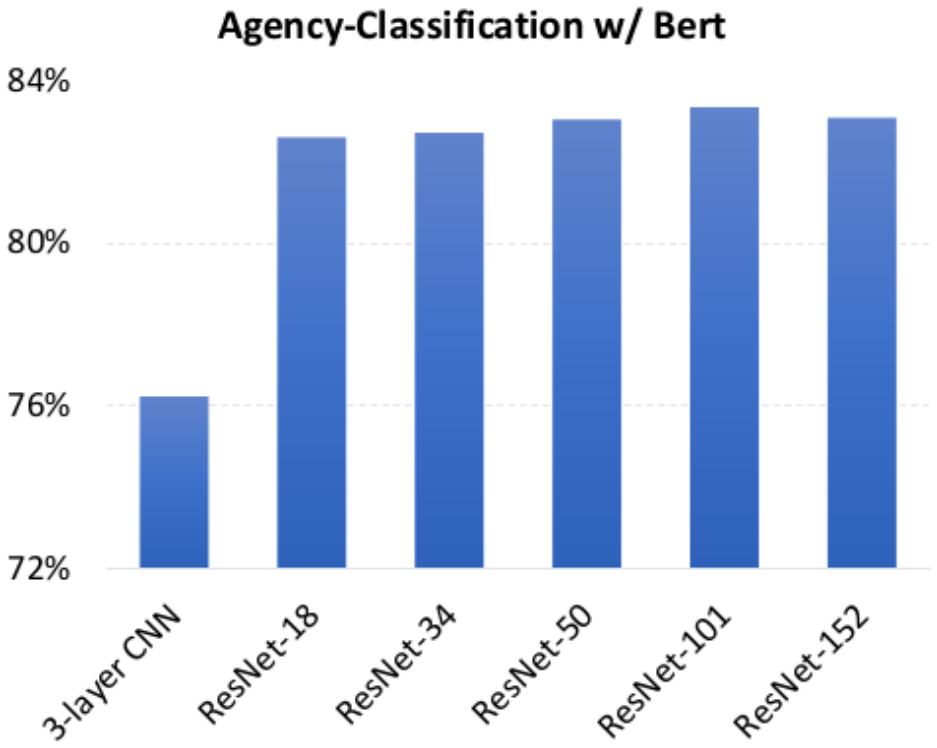
Results

Model	3-layer CNN	ResNet-18	ResNet-34	ResNet-50	ResNet-101	ResNet-152
Agency-Classification w/ Bert	76.24%	82.60%	82.72%	83.04%	83.35%	83.08%



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Discussion Conclusions

This study demonstrates the possibility of characterizing happiness computationally, which can shed light on the understanding of what behaviours make people happy. Through the experiments, we show that Bert can provide better semantic embedding compared to GloVe in terms of encoding happiness information. Our experiment results also indicate that ResNet with different number of layers while deeper networks tend to perform slightly better.

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References

- J. Wu et al., "HappyDB: A Corpus of 100,000 Crowdsourced Happy Moments," pp. 1–11, 2018
- J. Wu, R. Compton, G. Rakshit, M. Walker, P.Anand, and S.Whittaker, "CruzAffect at AffCon 2019 Shared Task: A feature-rich approach to characterize happiness," pp. 1–11, 2019

Thank you


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