

# Whether and why are people feeling happy?

## Mining Affective Events Based on Text-based Information

Ziming WU<sup>1</sup>   Feng HAN<sup>1</sup>   Song LIU<sup>2</sup>

<sup>1</sup>Department of Computer Science and Engineering  
The Hong Kong University of Science and Technology

<sup>2</sup>Department of Chemistry  
The Hong Kong University of Science and Technology

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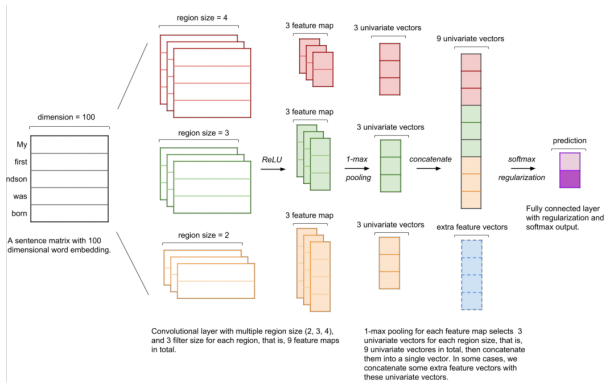
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**Figure:** A Diagram for the CNN model with region size (2, 3, 4) and filter size 3 for a single sentence.



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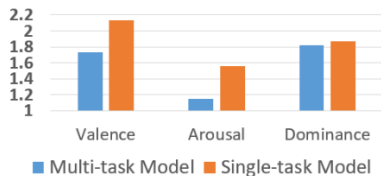
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	Multi-task	Single-task
Agency	85.13	83.04
Social	85.54	85.62
Valence	1.73	2.13
Arousal	1.15	1.56
Dominance	1.82	1.87

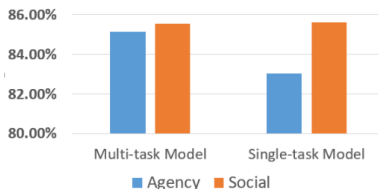
# Result

## Comparison

Comparison of Multi-task model and Single-task model on VAD model



Comparison of Multi-task model and Single-task model on Classification



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The multi-task learning (MTL) shows considerable power in handling deep learning on multi-task jobs. In our results, the multi-task model shows the better performance compared to the single-task model trained on each specific task. The comparison also indicates that the multi-task model still has space to improve. In a further study, we could update the current model and fine-tune it to get more accurate results.

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- 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

