

The OMG-Empathy Dataset: Evaluating the Impact of Affective Behavior in Storytelling

Pablo Barros¹, Nikhil Churamani³, Angelica Lim², Stefan Wermter¹

¹Knowledge Technology, University of Hamburg, Hamburg, Germany

²School of Computing Science, Simon Fraser University, Burnaby, BC, Canada

³Department of Computer Science and Technology, University of Cambridge, Cambridge, UK



The Dataset

What?

- Evaluating the **impact** of **affective stories** on one's **emotional state**.
- Current datasets focus on expression annotation, usually in shorter interactions [1].
- Lack of self-assessment and saturation of third-person opinions [2, 3].

How?

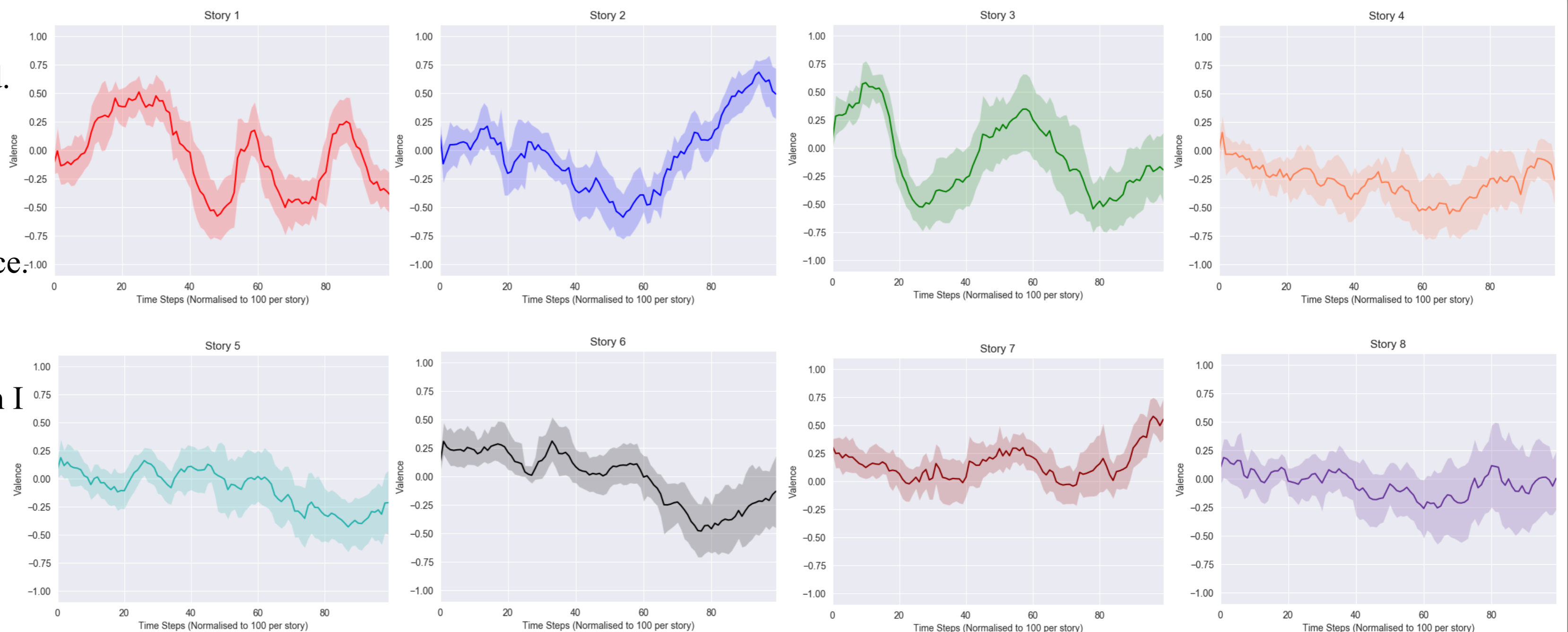
- Upper body video collection of **10 participants** reacting to **eight different stories**.
- Self-annotation** on how the participant was impacted by each story.
- Deep Neural Network** baselines using person-specific and general models.



Eight Different Stories

Story

- I miss my childhood friend.
- How I started a band!
- My relation with my old dog.
- I had a bad flight experience.
- I had an adventurous travelling experience.
- I cheated on an exam when I was younger.
- I won a martial arts challenge.
- I ate a very bad food.



Self-Annotations from Ten Participants for Each Story



Baseline Results

- Evaluating **CCC Scores** using Person-specific and Generalized Multi-modal Perception Models

Observation	Personalized	Generalized
Speaker	0.11	0.13
Listener	0.19	0.23
Both	0.17	0.19

References

- [1] M. Soleymani, D. Garcia, B. Jou, B. Schuller, S.-F. Chang, and M. Pantic, "A survey of multimodal sentiment analysis," *Image and Vision Computing*, vol. 65, pp. 3–14, 2017.
- [2] A. Zadeh, R. Zellers, E. Pincus, and L.-P. Morency, "Mosi: multimodal corpus of sentiment intensity and subjectivity analysis in online opinion videos," *arXiv preprint arXiv:1606.06259*, 2016.
- [3] P. Barros, N. Churamani, E. Lakomkin, H. Sequeira, A. Sutherland, and S. Wermter, "The OMG-Emotion Behavior Dataset," in *Proceedings of the International Joint Conference on Neural Networks (IJCNN)*. IEEE, 2018, pp. 1408–1414.