

Story generation from photos

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Context :

Traditionally, stories are considered to be made of a fabula and a discourse. The fabula is the chronological sequence of events happening in the story world. The discourse is the re-ordered sequence of tellings of those events. Most previous work on storytelling has focused on a fabula-driven pipeline, where the fabula is generated independently of and prior to the discourse. However, to create captivating fabula, it is important to consider discursive constraints, especially in visual storytelling, as stressed by Ronfard and Szilas [1].

To address those problems, researchers have proposed the challenge of story generation from photos [1, 2], where sequences of photos are used as hints for building a narrative discourse mixing text and images, and a fabula must be generated to explain and motivate the story. In this internship, we would like to propose novel solutions to the story-from-photos challenge by combining the strengths of story grammars and machine learning.

Objectives :

The goal of the internship will be to propose methods for generating a visual story (ordered collection of storyboard frames), given a general story canvas and an unordered collection of photos. We will extend the previous approach of Radiano et al. [4] to take into account a richer model of narrative annotation [5] and to automatically learn correspondences between the story and its graphic illustration from storyboard examples.

References

- [1] Ronfard, R., and Szilas, N. 2014. Where story and media meet: computer generation of narrative discourse. In Proceedings of the 5th Workshop on Computational Models of Narrative, 164– 176.
- [2] Rogelio E. Cardona-Rivera and Boyang Li. PLOTSHOT: Generating Discourse-constrained Stories around Photos. AAAI, 2016.
- [3] Microsoft Sequential Image Narrative Dataset (SIND) <http://www.sind.ai/>
- [4] Radiano, O.; Graber, Y.; Mahler, M. B.; Sigal, L.; and Shamir, A. Story albums: Creating fictional stories from personal photograph sets. In Press, Computer Graphics Forum, 2016.
- [5] David K. Elson. Detecting Story Analogies from Annotations of Time, Action and Agency. Computational Modeling of Narrative, 2012.