Generating Natural Language Descriptions of Trajectories Using Long Short Term Memory Neural Networks

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***Abstract*—**

References

[1] M. Lomas, R. Chevalier, E. V. Cross II, R. C. Garrett, J. Hoare, and M. Kopack, "Explaining robot actions," in *Proceedings of the seventh annual ACM/IEEE international conference on Human-Robot Interaction*. ACM, 2012, pp. 187–188.

[2] J. Sung, S. H. Jin, I. Lenz, and A. Saxena, "Robobarista: Learning to manipulate novel objects via deep multimodal embedding," *arXiv preprint arXiv:1601.02705*, 2016.

[3] B. Steder, R. B. Rusu, K. Konolige, and W. Burgard, "Narf: 3d range image features for object recognition," in *Workshop on Defining and Solving Realistic Perception Problems in Personal Robotics at the IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (IROS)*, vol. 44, 2010.

[4] G. Csurka, C. Dance, L. Fan, J. Willamowski, and C. Bray, "Visual categorization with bags of keypoints," in *Workshop on statistical learning in computer vision, ECCV*, vol. 1, no. 1-22. Prague, 2004, pp. 1–2.

[5] A. Graves, "Generating sequences with recurrent neural networks," *arXiv preprint arXiv:1308.0850*, 2013.

[6] S. Venugopalan, M. Rohrbach, J. Donahue, R. Mooney, T. Darrell, and K. Saenko, "Sequence to sequence - video to text," in *The IEEE International Conference on Computer Vision (ICCV)*, December 2015.

[7] M. Denkowski and A. Lavie, "Meteor universal: Language specific translation evaluation for any target language," in *In Proceedings of the Ninth Workshop on Statistical Machine Translation*, 2014.