

Localization with activity recognition and particle filter

1st Bergauer Philipp

TU Graz

Graz, Austria

philipp.bergauer@student.tugraz.at

2nd Halici Ömer Faruk

TU Graz

Graz, Austria

halici@student.tugraz.at

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I. INTRODUCTION

The Localization was splited into two parts, the first part was an Activity recognition and the second part was the localization Algorithm with the Particle Filter. The Activity recognition was implemented with an k-Nearest Neighbor(k-NN) algorithm. It was used to classify if the user is moving or not.

II. ACTIVITY RECOGNITION

A. Tensorflow approach

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LOCALIZATION

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Particle Filter

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Optimizations particle filter

REFERENCES

- [1] G. Eason, B. Noble, and I. N. Sneddon, “On certain integrals of Lipschitz-Hankel type involving products of Bessel functions,” *Phil. Trans. Roy. Soc. London*, vol. A247, pp. 529–551, April 1955.
- [2] J. Clerk Maxwell, *A Treatise on Electricity and Magnetism*, 3rd ed., vol. 2. Oxford: Clarendon, 1892, pp.68–73.
- [3] I. S. Jacobs and C. P. Bean, “Fine particles, thin films and exchange anisotropy,” in *Magnetism*, vol. III, G. T. Rado and H. Suhl, Eds. New York: Academic, 1963, pp. 271–350.
- [4] K. Elissa, “Title of paper if known,” unpublished.
- [5] R. Nicole, “Title of paper with only first word capitalized,” *J. Name Stand. Abbrev.*, in press.
- [6] Y. Yorozu, M. Hirano, K. Oka, and Y. Tagawa, “Electron spectroscopy studies on magneto-optical media and plastic substrate interface,” *IEEE Transl. J. Magn. Japan*, vol. 2, pp. 740–741, August 1987 [Digests 9th Annual Conf. Magnetism Japan, p. 301, 1982].
- [7] M. Young, *The Technical Writer’s Handbook*. Mill Valley, CA: University Science, 1989.

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