Title

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***Abstract*—**

***Index Terms*—**

I. Introduction

THE main contributions of this article are listed as follows. [1].

1) We propose a learning method based on DMP and FGMM which can not only learn the trajectory from multiple demonstrations but also learn the deviation among them.

2) We present a new LfD method which can demonstrate by single static image, each sample point on the image is encoded by a prior trajectory and FGMM. Skills are then learned through the proposed methods

3) We give a method for generating a priori trajectories of Chinese characters, and design a robot learning framework for learning to write. Experiments were carried out on the LASA dataset and Chinese character images to verify the effectiveness of the method.

II. Learning the trajectory and deviation from multiple demonstrations

Here

A. Fuzzy Gaussian Mixture Model

B. Dynamic Motion Primitives

III. Learning from static image

IV. Experiments

A. Robot writing learning framework

V. Conclusion

References

[1] Z. Ju and H. Liu, "Fuzzy gaussian mixture models," *Pattern Recognition*, vol. 45, no. 3, pp. 1146–1158, 2012.

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