



ReadMe for TGSD-SD

1. Environment

Python 3.5

Mujoco1.3.1: http://www.roboti.us/download/mjpro131_linux.zip

2. Trajectory Generation with Skill Diversity

2.1. TGSD.py launches Skill Diversity

The generated skill is stored as a PKL file, and our run results are stored in:

[ACTION_LENGTH100](#) and [ACTION_LENGTH300](#).

Due to the limitation of uploading size, GitHub only shows part of the representative results, and the complete experimental results and videos can be obtained from the following web disk:

https://pan.baidu.com/s/1X_SPVDFDbg7GYAU92bk_Jw

Key: t55n

Program Run: python TGSD.py --env= "[Environment](#)" --log_dir= "[Storage Location](#)"

Tips:

- Parameters changes: Row 19
- Environment changes: Row 42

2.2. Visualize_skill.py allows you to visualize the generated skills. Our visualization results are saved in [Skill Video100](#) and [Skill Video300](#).

Program Run: python visualize_skills.py "[Storage Location of pkl](#)"

3. Trajectory Matching with Sinkhorn Distance

Sinkhorn Distance is the best similarity evaluation algorithm, the expert skill, student skill, and max-path-length is needed (Set as you wish).

Program Run: [Sinkhorn Distance.py](#)

4. Implementation on Real Robot

Realize the transfer of robot trajectory from Mujoco to UR5.

Program Run: [Sim-to-Real.py](#)

Please feel free to change and use the code for review and academic purposes. If you have any questions, please contact us by: jxxie20@fudan.edu.cn