Week 8 - HMI Research Group

24 Jul 2017 - 28 Jul 2017

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July 28, 2017

Summary

Started the next phase of the project: integrating gesture generation with speech.

Points

- Read the papers suggested regarding smarter techniques to interpolate motion.
- Wrote `gesture_suite.py`, a class that will directly interface between speech and motion.
- Generated several `NAOMotionDataAnalyzer` instances for different types of motions, such as *yes*, *no*, *you*, etc.
- In regards to the previous point, used gestures with similar body joint trajectories to generate more accurate data.
- Isolated key joints away from the rest of the body: generated data will focus only on the head and arms, while NAO's autonomous life function will take care of natural torso/leg movement.

Plans

- Start working again in `spaCy`, this time changing the classification problem into the different types of gestures being worked on now (more specific subsets).
- Accurately train another `spaCy` model.
- Get access to the real NAO robot to test for any efficiencies that might result from translating simulated experiments to physical experiments, such as overheating, memory overhead, etc.
- Begin to merge speech predictions with accurate time intervals of gesture generation.

Addendum

The repository can be found `here`.