Animation Generation from Text

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INTRODUCTION

Automatically generating animations from natural language text finds application in a number of areas e.g. movie script writing, instructional videos, and public safety. Text-to-animation systems can be particularly valuable for screenwriting by enabling faster iteration, prototyping and proof of concept for content creators.

OBJECTIVE

To develop a text-to-based animation system by representing natural language text, especially instructional text into a machine understandable form.

METHODOLOGY

Approach: Novel approach of considering the actions extracted from text to be composite of atomic actions, of which there are pre-built animations in the system. The aim is not to generate a polished, final animation but a pre-visualization of the input text.

Dataset: Cooking

Technologies used:
1. Berkeley parser for parsing the input text
2. Spacy and neuralcoref for Coreference Resolution
3. Blender tool for creating animations
4. Python

RESULTS

Given an input text describing a certain activity, the system generates a rough animation of the text, provided the activity can be decomposed into one or more of the pre-defined atomic actions.

CONCLUSION

We have created a robust NLP pipeline to extract action sequences from cooking recipes and map them to the system's knowledge base consisting of atomic actions and their animations.