

TITLE

A Framework for Integrating Gesture Generation Models into Interactive Conversational Agents

BACKGROUND

Gesture generation research has recently shifted towards machine learning based methods. However, these methods have not been applied in interactive settings yet.

THE FRAMEWORK

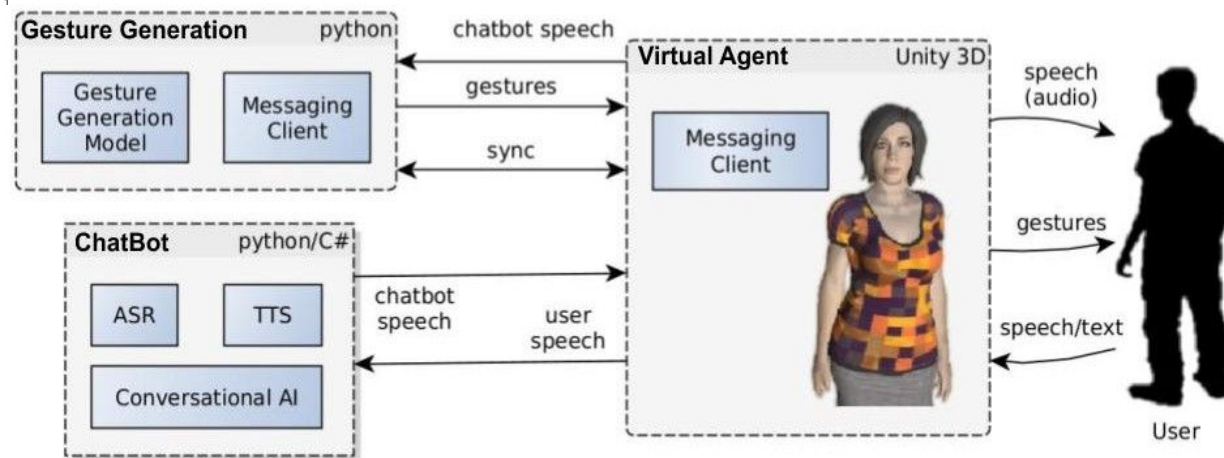
Our framework integrates

- a virtual agent in Unity 3D;
- a chatbot backend for generating responses; and
- a neural network for generating gestures from speech (Gesticulator).

USE CASES

- Benchmark platform for evaluating modern gesture generation models
- More realistic character behavior for virtual agent research

Our framework integrates modern gesture generation models into conversational agents in Unity 3D.



Code and video demonstration available at github.com/nagyrajmund/gesturebot



Using **Gesticulator** to generate gestures from speech and text, we demonstrate two systems:

DialogFlow version

DialogFlow is a popular conversational platform with inbuilt ASR and TTS capabilities

This version provides a **high level of control over the agent's responses.**

Blenderbot version

We combine an open-domain chatbot with Mozilla TTS to synthesize speech.

This version is more suited for **free-form conversations**

Rajmund Nagy,
Taras Kucherenko,
Birger Moell,
André Pereira,
Hedvig Kjellström,
Ulysses Bernardet

