

Conversational Gestures: Transforming Text into Full-Body Virtual Interactions

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Goal

Create a Gesture Generation Model that

- · Creates realistic full-body gestures
- · Communicates virtually in real-time
- · Embody nuances of nonverbal cues
- · Engage in human-gesture dialogue

Method

This work introduces a new approach transforming text into full-body gestures

- Gestural Transformer Framework
- Allocentric Gesture Dataset
- Text-to-Gesture Sequence Mapping
- Full-Body Gesture Synthesis

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Preliminary Results

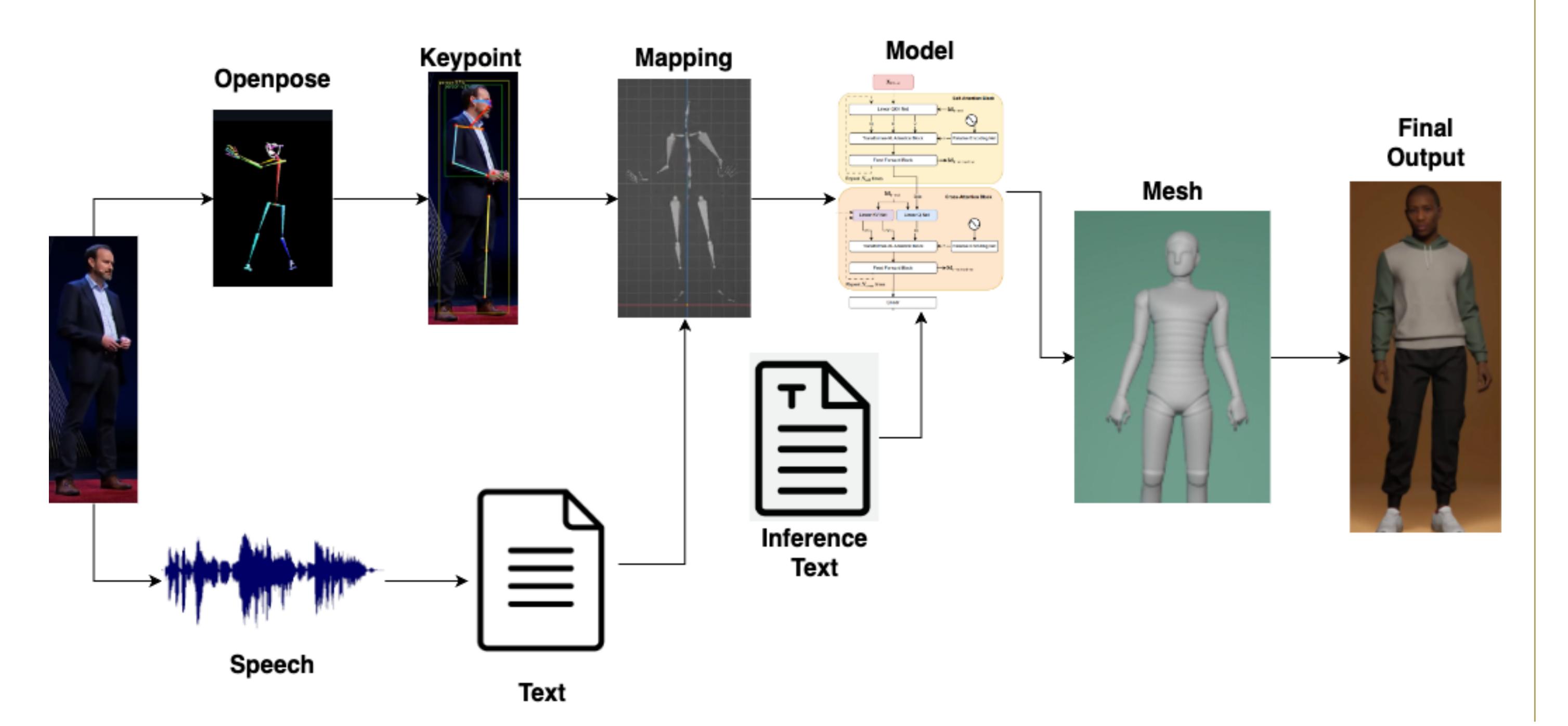
Table 1: Summary of results for human-likeness.

Condition	Median	Mean
NA	71 e [70, 71]	68.4
AM	70 e [69, 70]	67.9
\mathbf{SG}	64 e [63, 65]	61.8
\mathbf{SF}	63 e [62, 64]	61.2
SJ	59 e [58, 60]	57.1

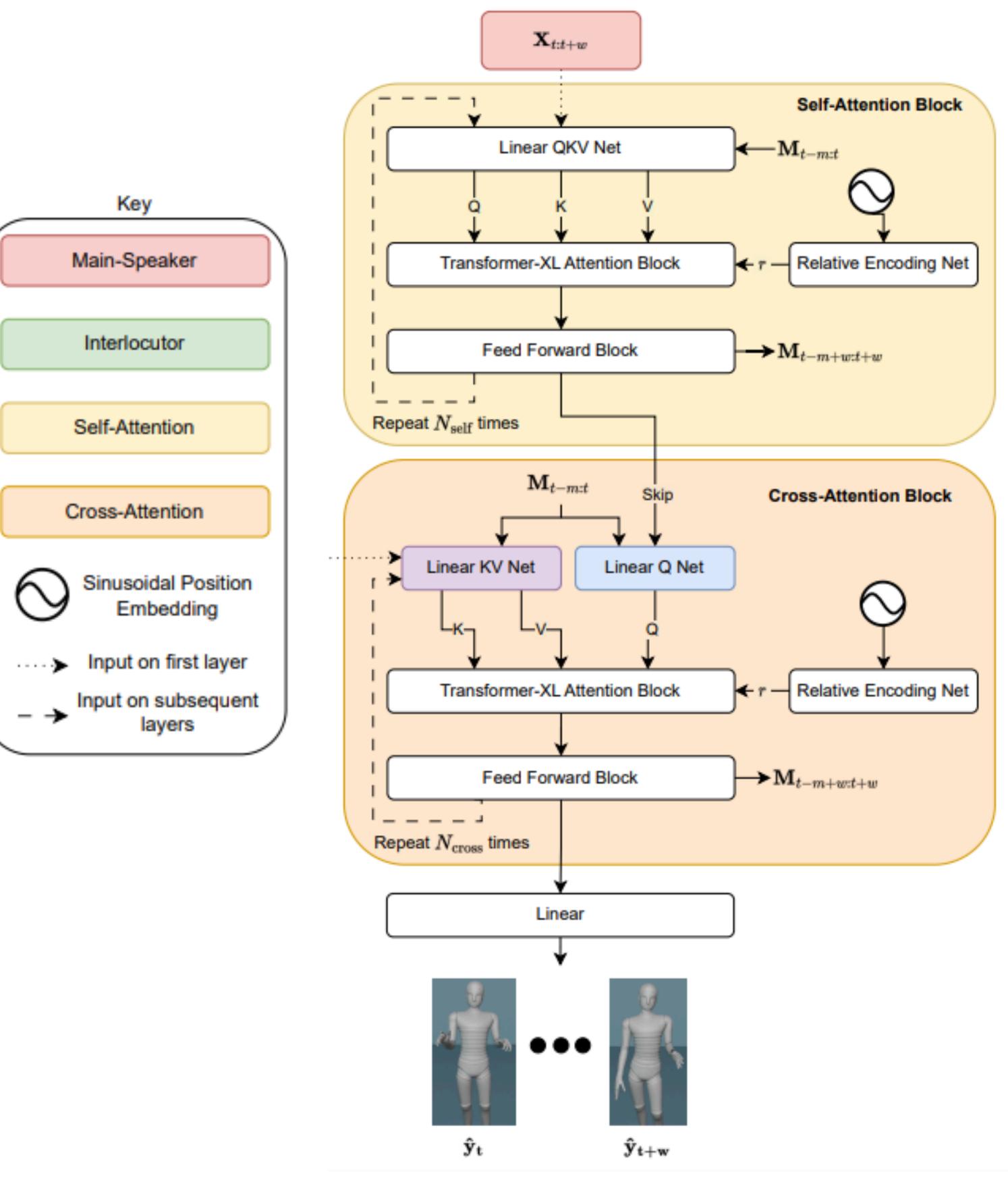
Table 2: Summary of results for speech appropriateness.

Condition	MAS	Pref.M. (%)
NA	0.81	73.6
\mathbf{AM}	0.80	72.2
\mathbf{SG}	0.78	70.4
\mathbf{SF}	0.76	69.3
SJ	0.74	67.9

Gesture Generation Approach



Model Architecture



Scan to be in the loop

UEA + AVA Approach

