Early Design of a Conversational AI Development Platform for Middle Schoolers

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Motivation

More young people are interacting with smart conversational agents such as Alexa and Google Assistant. However, many children do not understand how these smart tools work. Understanding the AI concepts behind these tools can help young learners navigate and use such tools efficiently.

Goal

Develop prototype of a novel conversational app development tool, **AMBY (AI Made By You)**, for middle school students to create their own conversational agents.

AMBY: Design and Development

Method

We first conducted contextual inquiry in a two-week middle school summer camp and received initial ideas and feedback from the learners.

Based on their input, we developed the initial prototype for AMBY and carried out two more iterations (alpha and beta usability testing) to further improve the application.

Features

- Choice of avatar selection for conversational agents
- Voice as an input modality
- Visualization of dialogue flow
- Testing panel
- AI's voice customization
- Intent editing window
- Agent training/learning animation

AMBY (AI Made By You) Interface

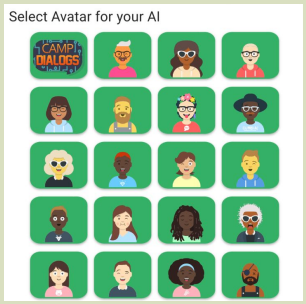

Figure 1. Avatar selection page

Figure 2. Agent "learning" animation, played after students train an intent

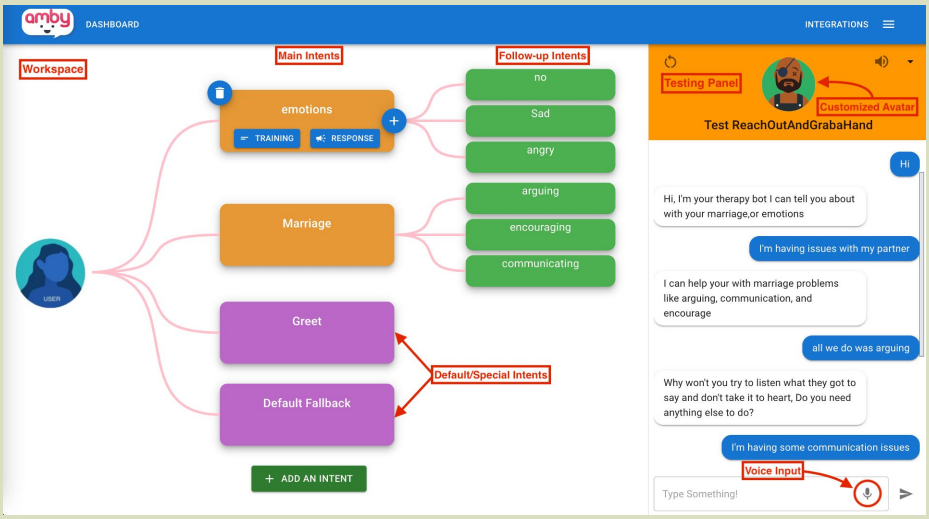

Figure 3. AMBY interface: Dialogue management workspace (left) and testing panel (right)

Conclusion and Future Work

Features of the AMBY are informed by an iterative design process, and aim to address the limitations of other interfaces, while also providing visual cues to foster AI literacy in students as they make their conversational agents. AMBY is still under development and in the future we plan to make further changes to the tool:

1. Study with a larger user base.
2. Integration of advanced features such as entities (variables), contexts, etc.
3. UI modifications based on analysis of 2022 AI summer camps.

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