CLAIMS

What is claimed is:

1. A method for providing virtual assistance comprising:

receiving a user input comprising a user request for action or information;

generating two or more primary interpretations for the user input by processing the user input to generate the two or more primary interpretations of the user input, the two or more primary interpretations comprising unique possible transcriptions for the user input;

generating one or more secondary interpretations for one or more of the two or more primary interpretations by processing one or more of the primary interpretations to form alternative interpretations;

determining one or more primary actions responsive to the two or more primary interpretations and the one or more secondary interpretations;

preparing one or more results from executing the one or more primary actions;

determining whether one or more secondary actions exist responsive to at least one of the one or more primary actions;

if the one or more secondary actions exist, continuing to process the two or more of the primary interpretations, the one or more secondary interpretations, the one or more primary actions, and the one or more secondary actions until no further additional actions can be predicted;

upon one or more additional actions not existing, designating the one or more results for which no additional actions are predicted as one or more terminal result;

scoring the one or more terminal results;

designating the terminal result with the highest score as a top result; and

outputting at least the top result to the user or taking an action defined by the top result.

2. The method of claim 1 wherein scoring is based on one or more of the following factors:

a first scoring factor based on a conversational state, the conversational state comprising the one or more primary interpretations, the one or more secondary interpretations, the one or more actions, the one or more results;

a second scoring factor based on a user profile, the user profile comprising user preferences and user history stored on the one or more servers;

a third scoring factor based on auxiliary metadata, the auxiliary metadata comprising data stored on the one or more servers not related to user preferences and not related to user history.

3. The method of claim 1 wherein the user input is speech spoken by the user.

4. The method of claim 1 wherein the generating two or more primary interpretations for the user input occurs concurrently in parallel.

5. The method of claim 1 further comprising requesting the user for clarification to which of the one or more primary interpretations or one or more secondary interpretations are correct.

6. The method of claim 1 wherein the method is performed by an artificial intelligence layer operating on an operating system of a user device.

7. The method of claim 1 wherein outputting at least the top result to the user or taking an action defined by the top result comprises one or more of the following: playing a song, initiating a phone call, providing information to the user, playing a video, sending a text message, recording a video, transmitting information from a user device, and controlling a light.

8. A method for providing virtual assistance comprising:

receiving a user input comprising a request for action or information;

generating two or more interpretations of the user input by processing the user input, the two or more interpretations comprising unique possible transcriptions for the user input;

matching at least one of the two or more interpretations to one or more primary agents based on the one or more primary agents being configured to process the at least one interpretation;

selecting, by the one or more primary agents, one or more skills configured to process least one of the two or more interpretations;

generating one or more results, by processing with the one or more skills, the at least one of the two or more interpretations;

determining whether one or more secondary agents may be matched to the one or more results for further processing of the results by one or more of the secondary agents;

if one or more secondary agents are matched, continuing to process the one or more results to generate additional results;

designating at least one of the one or more results and at least one of the additional results as two or more terminal results;

scoring the two or more terminal results;

designating the terminal result with the highest score as a top result; and

outputting at least the top result to the user or taking an action defined by the top result.

9. The method of claim 8 wherein an agent is a software module or routine executable to carry out parallel hypothetical reasoning.

10. The method of claim 8 wherein a skill is a software module or routine executable to perform a task or generate a result in response to a single user query.

11. The method of claim 8 further comprising generating one or more secondary interpretations for at least one of the primary interpretations.

12. The method of claim 8 wherein receiving user input comprises receiving speech from the user and converting the speech to a digital signal.