

Errors & Limitations & How I fixed some of them

1. My app only accepts days of the week when asking users which day the meeting will be. I put all days of the week in the grammar and only checked if the user input exists in the grammar.

Solution: Extend the function *isDateValid* to check if the user input matches the format of dates. The user input is normalised to a form like "March 15". A date object is created from this form, and a validation is conducted. This fix allows the system to take inputs for a specific date.

2. My app cannot detect invalid date input. For instance, when I say "March 32", it considers it a valid date and will eventually book an appointment on March 32 for me. The reason why it is like that is because when I create a date object from the utterance such as "March 32", it automatically corrects to a valid date "March 1", which is valid.

Solution: Modify the function *isDateValid* to check if the date in the utterance string is the same as the day in the created date object. For example, when the date object is created, the day of this object is "March 1", while the original utterance is "March 32". "32" is not equal to "1", so it will return false, and the app will notify users that it's not a valid date.

3. My app can only accept provided times that the speech recognition understands that it's a time and will convert it to the form of HH:MM, such as quarter past one, one AM, one PM, eight-thirty, 8 o'clock, and quarter to two. It doesn't accept times like thirteen and ten sixteen.

Solution: Modify the function *isTimeValid* to further validate the time input depending on the length of the input. For example, speech input ten sixteen (1016) will be divided into 10 and 16, which are hours and minutes that can be validated.

4. If the length of time input is 3, the app cannot validate it and will automatically consider it as an invalid input. Also, some cases, like ten fifteen, will be detected as 10/15 by the speech recognition feature, which will be considered invalid time.

Solution: No, I haven't fixed it.

5. After users click the button, the app starts to listen to the users. This aims to enable users to say "Hi", as illustrated in the provided diagram. The limitation here is that the app accepts any speech input without checking if the user input is valid and relevant or not.

Solution: No, I haven't fixed it.

6. The accepted names of people right now are very simple. Some simple random first names are stored in the local grammar entries, which makes a lot of names unable to be detected and considered valid input. I tried to use an external API that includes a database of names but didn't successfully implement it.

Solution: No, I haven't fixed it.