

Check In for the Italian Chat Bot Application: "La Vita Italiana"

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Once reaching a stopping point in development, the Italian Chat Bot game was ready for release. Upon release, the process of collecting feedback could be initiated and changes put into effect to improve the experience.

CCS Concepts: • **Human-centered computing** → **Human computer interaction (HCI)**; • **Applied computing** → **Language translation**.

Additional Key Words and Phrases: Language, Italian, LLMs, Game, Learning

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1 Introduction

At the point of the previous check-in, the Italian Chat Bot Application had neared a point that it was ready to release for initial user testing. After a few more updates, the site was published, and collection of feedback began. Through analysis of the feedback, changes could be implemented that would improve the user experience and quality of the AI solution.

2 Feedback

The primary obstacle to collecting feedback was finding volunteers that had an intermediate understanding of the Italian language. Users were primarily solicited via posts to internet forums such as Reddit[3] (Fig 1). This had the intended effect of driving some traffic to the site, but ultimately the total number of users that created accounts was only 11 (Fig 2). There are four forms of feedback that were collected after the release of the application: a survey, message aggregation, per message suggestions, and an in-person interview. Each of these provided different qualitative and quantitative information about how users are interacting with the application. Among all of these forms of feedback, there are plenty of improvements that can be extracted for the application.

2.1 The User Survey

There is a survey that is displayed to the user once they complete their first conversation. The questions asked in the survey can be found in the Appendix. Due to the low number of users and the volunteer nature of the survey, there were only two responses to work with. One raised concern with the UI which is covered in the Interface section. The other response was a recommendation concerning the realism of the conversations. Unfortunately, due to the prototype nature of the project, the conversational system is not as refined as ideally hoped. A more realistic conversation will only be achievable through further data aggregation and training.

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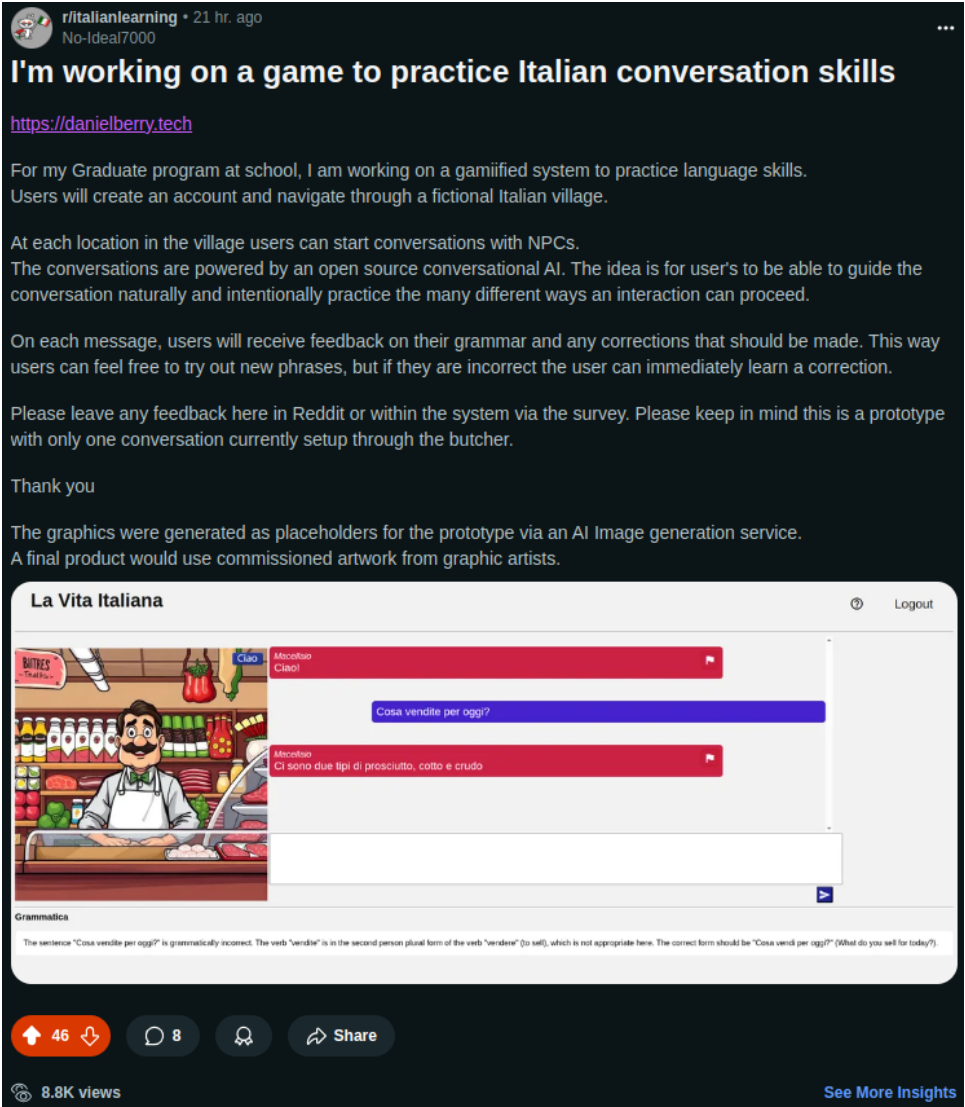


Fig. 1. Example Post to Help Collect Feedback

2.2 Message Aggregation

The collection of user prompts has been one of the most valuable forms of feedback data. Going through the message logs of other users, the available phrases and vocabulary for the conversation can grow ever larger. So far, about 14 new prompts have been added to different user intents such as ordering and inquiring about the menu. By training on those, the AI is able to interpret a wider variety of inputs.

```

sqlite> SELECT COUNT(*) FROM users WHERE id>3;
11
sqlite> SELECT COUNT(*) FROM surveys WHERE user_id>3;
2
sqlite> SELECT COUNT(*) FROM messages WHERE user_id>3;
51
sqlite> SELECT COUNT(*) FROM feedback WHERE user_id>3;
4

```

Fig. 2. Stats of new users, and related feedback

2.3 Complaint and Recommendation System

On each response is a button that allows users to submit feedback concerning a specific response. Of the four submissions received, two of them were just complaints about how the system did not make much sense. There are some bugs with the conversation system and the way it goes between responses inside a form. This will need to be rectified. The third submission was a complaint about the accuracy of the grammar check. It will be good to integrate the complaint system into the grammar check as well, even though there is little control we have over the responses we get back from ChatGPT[1]. The fourth and final feedback submission was a suggestion with an improvement to the dialogue. The suggestion provided an expansion of the pricing system and the available menu. This sort of recommendation is unfortunately out of scope for the foreseeable future.

2.4 In-person Interview

The final form of feedback was a free-form interview, where I observed a user navigate through the application, followed by a few questions once they finished their first interaction. Aside from concerns with the unfinished prototype, the interviewee gave some recommendations of the kind of content that they want to see. They gave much appreciation towards the grammar check and saw it as the most useful part of the application. The interview process ended up being much more helpful in finding general application bugs than on improving the AI solution.

3 User Interface

The user interface was close to completion at the time of the previous checkpoint, however after the initial release, some of the feedback included in the survey pertained to the user interface. The first change to take care of was the inclusion of a clickable button to submit messages. Before now, the only way to submit messages was via the Enter key, which was not completely clear. With the extra button, there are now multiple ways to interact for different users (Fig 3).

3.1 Removing Grammar Check Block

Another issue that came up was with the grammar check interface. It was hard-coded to check for English and would not forward the user prompts to Rasa[2] if it was in English. This quickly became an issue since Italian uses so many words that intersect with the English language. For example, using a common phrase such as "OK", to make an affirmation, was blocking users from progressing down the conversation path. The fix involved removing the hard block on English phrases.

The screenshot displays a chat interface with a light gray background. The conversation history consists of alternating blue and red message bubbles. Blue bubbles represent user input, and red bubbles represent the bot's response. The bot's responses include a name 'Macellaio' and a small red flag icon. At the bottom, there is a white text input field and a blue button with a white right-pointing arrow.

142 Posso avere il prosciutto?

143

144

145 *Macellaio*

146 Quale tipo?

147

148

149 Il prosciutto crudo

150

151

152

153 *Macellaio*

154 Quanti chilogrammi vorresti?

155

156

157 Tre

158

159

160 *Macellaio*

161 Qualunque altra?

162

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165

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169

Fig. 3. Feedback Submission Interface

3.2 New Survey Interface

Since the previous checkpoint the interface for the free-form user survey has been completed (Fig 4). When a user finishes their first conversation, they are prompted with a popup modal that has all of the questions for the survey found in the appendix. The survey is optional and once they have completed it once, they are not asked again.

4 Evolution of the AI Solution

The major evolution of the AI solution revolved around the tuning and expansion of the Rasa[2] Open Source parameters. Entities have been added that extract necessary points from the conversation. The domain and training set has been widely expanded to include all types of phrases and words that are used for different intents. Many of these are curated from the message saving feedback system.

4.1 Rasa Forms

Part of the Rasa[2] application is access to forms where data is extracted from the conversation. In this example, we are extracting order information using common questions that a user could expect to see in real life (Fig. 3).

Please Consider Taking this Short Freeform Survey

1.a. Did you experience any out of place dialogue during the interactions?

b. If so, do you feel as it was a natural progression of speech?

2.a. Did you ever get stuck or not know what steps to take next?

b. Do you have any recommendations on how you would improve?

3.a. Were the instructions ever unclear when using the application?

4.a. Do you feel as though your Italian conversation skills have improved?

5.a. What types of interactions were missing that would you like to be able to practice?

Fig. 4. Feedback Submission Interface

Once all of the slots of the form are filled, it will attempt to finish the conversation. In the future, this system could be integrated into the game world to help with achievements and further gamification of the experience.

4.2 Removing the Paladin Check

Another big development was the removal of the paladin check from the system. The Rasa open source conversational AI application does not allow any responses outside of preset text. This way every response went through a grammar check beforehand and was carefully evaluated. This saves on costs to ChatGPT[1] to check and verify the correctness of every response from Rasa[2].

5 Deployment and Release

Currently the prototype is available to try on my personal website at <https://danielberry.tech>. Users will need to create an account and can instantly start to use the product. The only interaction currently available to try out is with the butcher within the grocery store. They can ask questions about the selection, prices and make an order.

The next steps for the development of the current interaction will be to ingest records from the feedback and put out new versions of the model.

I would like to refine the interface and fix bugs in the conversation message passing system. Similarly, integrating the feedback system into the grammar check system would be a beneficial addition to the program. In order to make the product easier to start using, it would be good for first time users to have light up prompts within the game that show them where to click and navigate to.

6 Plans for the Final Report

With the introduction of the changes mentioned above, the future of the application will rely on users and aggregated feedback. Over a prolonged time the conversational AI is expected to improve.

With the final report coming soon, it will detail the journey and progression of the feedback system and how it has affected the development of the conversational AI. The most significant changes were the introduction of the grammar checking system and it's ability to provide instantaneous feedback.

The primary principle of HCAI that is used in the application has been the involvement of users in the design process. Their recommendations will affect the future of the application. The types of stories and characters that they want to interact with are evident in their feedback. Through continuous usage of the site, the product will continue to improve. The manual curation of responses for the characters along with a curation of prompts to train with gives the project a balance between automation and human oversight. Lastly, the ways in which the project learns and works is explore-able by the users, they can dive into the code or just use the product to understand it.

The final report will detail how each of these principles of Human-Centered AI Development react with one another. The feedback system is continuous and robust enough to allow much value from a small implementation effort. It is a convenient and powerful tool to leverage the principles of HCAI.

References

- [1] OpenAI. 2024. . Retrieved Mar 16, 2025 from <https://platform.openai.com/docs/quickstart>
- [2] Rasa. 2025. . Retrieved Mar 16, 2025 from <https://rasa.com/docs/rasa/http-api>
- [3] Reddit. 2025. . Retrieved Apr 19, 2025 from <https://reddit.com/>

A Optional Survey Questions for After Conversation Sessions

Collection of questions for the survey that were requested after completing the first interaction:

- 1a. Did you experience any out of place dialogue during the interactions?
- 1b. If so, do you feel as it was a natural progression of speech?
- 2a. Did you ever get stuck or not know what steps to take next?
- 2b. Do you have any recommendations on how you would improve? 3. Were the instructions ever unclear when using the application?
4. Do you feel as though your Italian conversation skills have improved?
5. What types of interactions were missing that would you like to be able to practice?

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