

AI system review:

Using the City's Google AutoML translation system, residents can view the San José 311 website (<https://311.sanjoseca.gov>) and file service requests in Vietnamese or Spanish. The City will receive the service request in English and respond in English. The response will then be translated into the resident's preferred language.

The translation system is built on Google's base translation model and further trained by City-provided data relevant to City service requests. Consequences for poor performance are limited to loss of services, and inaccurate translations can be fixed by the City manually updating the model.

Additionally, the system is easy to update and monitor for accuracy through the vendor's cloud platform. Based on standard evaluation metrics of translation AI (the BLEU metric), the system performs well in English to Spanish, Spanish to English, and English to Vietnamese. However, the system performs relatively poorly (though still usable) when translating from Vietnamese to English. The City should explore improving its Vietnamese to English translation database for better translations.

Given the easy access to update the system, addressable set of consequences, and understandable accuracy metrics, this AI system is approved for usage in the City. The City should work to improve its Vietnamese to English translation.

Project objective

1. Please clearly describe the project use case, the current process, and the desired outcome. *

1. When residents create a service request on the SJ 311 platform (<https://311.sanjoseca.gov>), if the resident's preferred language is set either to Spanish or Vietnamese, the resident receives email communication in their preferred language. The call center views this service request in English. While the call center responds in English, the resident receives the email translated in the preferred language. This is achieved using Google AutoML.

2. The SJ 311 website supports both Vietnamese and Spanish. The website is translated using a free Google widget.

2. Which department is owning this system? *

ITD

3. Why does your department choose automation as an approach to this problem? What other approaches to solving this problem were considered (if any) and what led to choosing automation? *

57 % of the residents in San Jose speak a language other than English at home. To cater to this growing population, SJ 311 web can be viewed in both Spanish and Vietnamese. San Jose 311 has only been available in English since its 2017 launch. October 2020 we introduced the Spanish and Vietnamese language preferences. The website can be translation into these two languages based on the residents choice. The City had reservations about using free tools(Oracle provided out of the box translation) based on past experiences: Default translation was removed after residents complained that some translations were offensive. That is when City adopted the Google free translate widget and the AutoML solution.

Vendor details

4. Will the algorithm be designed, developed, deployed, or maintained by vendors or third parties? *

- No
- Yes, solely by vendors/third parties
- Yes, by both vendors/third parties and City staff

5. How can the City test the vendor's algorithm before it is put into use? *

Vendors were hired and City employees were engaged for correctness of the Google AutoML translation.

Transparency

6. How do individuals receive a notice in advance of interacting with the system? For example, if a user is interacting with a chatbot, the system lets the user know they are talking to a chat bot instead of a human. *

The individuals would not be able to notice any difference as the translation is seamless. Although the correctness of the translation maybe an issue in some cases.

7. How can third-party auditors easily view the system's data in order to perform evaluations? *

We have a csv files of the name-value pairs of the translation. The file contains, english-to-spanish, spanish-to-english, english-to-vietnamese, vietnamese-to-english name-value pairs.

8. How will system operators or residents know if the system outputs an error? What ability will they have to correct or appeal an error? *

We have a form we ask users to fill out if they find any incorrect translations on the website.

Equity

9. What individuals and communities will interact with the system? For example, is the algorithm used on the general City population (technology used in many public areas) or a specific group (e.g., children in a school program, a single neighborhood)? *

The SJ 311 website is accessible by anyone with access to the internet. The SJ 311 website targeted for San Jose residents and businesses. You may or may not require a SJ 311 account to access the services the City has to offer.

10. How likely is it that the system impacts children under the age of 18? *

Not likely.

11. How is this use case, and the information/decisions provided by the algorithm, related to an individual's right or freedoms (e.g., if the algorithm helps determine if a suspect can be put on bail or must remain in jail)? *

Not applicable.

12. How is this use case, and the information/decisions provided by the algorithm, related to an individual's economic status (e.g., if the algorithm helps determine if an individual can apply to affordable housing)? *

Not applicable.

13. How is this use case, and the information/decisions provided by the algorithm, related to an individual's health, healthcare, well-being (e.g., if the algorithm helps determine an individual's likeliness for colon cancer) *

Not applicable.

14. How do decisions from the system impact the environment, if at all? (e.g., potential impact to carbon emissions, high tech waste) *

Not applicable.

15. What issues could arise if the algorithmic system is inaccurate? *

There could be some angry residents if the language translation is not translated correctly and accurately.

Human oversight

16. Please describe the level of autonomy of the system. *

- System operates automatically with no human intervention
- System operates automatically with occasional retrospective reviews by humans
- System operates automatically with opportunity for human to override any individual action
- System produces recommendations but cannot act without human intervention
- the csv file needs to be set up every 18 months.

17. If there is human intervention in the system, is it by the vendor, City department/office, or both? *

- Vendor
- City department/office
- Both

18. Please list the roles/divisions that will be "touching" the system, or managing the deployment and use of the system. *

Technical lead, Products-Project Manager, Technical Manager from the ITD.

19. How does the Department provide training and resources to personnel to help them develop the skills they need to effectively operate the system? *

We have a zoom session with the SME, in addition to documentation located in sharepoint site.

20. In the event that the system does not work or is deemed to be inaccurate, what back-up measures are in place to ensure that the Department can continue to deliver services? *

Incase of language translation, the corrections are made to the text that is translated incorrectly.