Google Solution Challenge

**Question 1**

Please clearly describe the United Nations' Sustainable Development goal(s) AND target(s) you are looking to solve with technology. What inspired you to select these specific goal(s) AND target(s)?

The ability to comprehend and analyze text is extremely critical as literacy plays a significant role in reducing gender, race, nationality, and religious inequality by providing access to education, property, employment, health care, and government services. People with literacy problem face several difficulties in proceeding daily life activities from navigation and ordering food to services utilization. With fright and shame, it discourages people in this group to seek for help and puts them at risk as they are unable access and utilize necessary services that aim to improve quality of life.

The UNSDGs we would like to address is Reduced Inequalities (10) and Sustainable Cities and Communities (11). Our team targets population with literacy problem who face difficulties in accessing and utilizing services provided by the government. Since filling a form requires a certain level of literacy, it becomes one of the major obstacles preventing people from obtaining and utilizing governmental services such as health care and public welfare. Our team aspires to reduce the gap and foster an inclusive community by creating a tool that helps facilitate this difficult task, so that people with literacy difficulty can proceed their daily activities while ensuring the access to services in needs.

**Question 2**

How does your solution address the challenge you are looking to solve for?

Parrot.ai is a web application that allows users to complete a form or an application without having to read and write by themselves. It will navigate users through the form and fill out each question using \_\_\_\_\_\_\_\_\_\_\_\_.

Social services and government agencies can partner with Parrot.ai to create an interactive form that helps overcome literacy barrier. Literacy is not the only factor that limits the access, but usually also the disproportionate numbers of agency workers and people who need help.

Our web application will free up some responsibilities of agencies, allowing them to perform their tasks more efficiently and effectively, and 22% of adults in the US who can perform below basic literacy level (National Center for Education Statistics, 2017) will instantly gain a better access to social services and public welfare. As the literacy barrier is eliminated, it will also encourage more participation in civic engagement, informational request, and assistance seeking, which can help people with literacy difficulty to accomplish more advanced tasks and achieve a better quality of life.

With Parrot.ai, the city will have tool to reduce inequality and establish an inclusive infrastructure that foster community growth without leaving any group of population behind.

**Question 3**

What do you see as the future / next steps for your project? How will you expand your solution to reach a larger audience?

There are several activities that make it more difficult for people with literacy problem to connect and engage with their community. In the next step, we would like to expand the scope of our service so that it can serve more personal purpose such as financial activities, job application, or continuing education.

Sine the United States is not the only country with prevalent literacy problem, we see that making Parrot.ai available in other language will broaden its impact and largely expand target audiences. Moreover, we consider adding a translation feature to accommodate new population demographics such as immigrant and refugee who might not be comfortable and familiar with new language.

**Question 4**

Walk us through the steps you took to test your solution. Can you provide three specific feedback points you received from users that tested out your solution?

After our team identified the challenge for people with literacy difficulty, we conducted market and target analysis to examine the

developed the solution around the target users’ needs

Step = (1) Identify the potential problem/challenge of vulnerable group and brainstorm for the solution

(2) While developing our solution, Researching through literature review, statistics, existing interviews conducted by other organizations to see pain point a and the possibility of the solution to make sure that it is realistic and impactful (See resources and existing app)

(3) Ask 7 people from friends and family members to use the demo web application to fill out a form requesting a driving license and ask them to provide feedback and describe their experience

The three most relevant feedbacks we received are the followings:

1. How to make sure that the information is filled correctly
2. Don’t understand some of the question in the form
3. Don’t remember what the question is asking about

**Question 5**

Please share the outcome of your testing strategy. What are three specific things you implemented and improved for your solution based on the feedback from users?

The outcome is better than what we expected since we expected that people would struggle with using voice command and we thought that it would be hard for the software to translate answers correctly, but it was fine which might be due to the fact that people are now become much more familiar with voice command and the voice type technology is constantly improving

However we are aware that the test is not a

**Question 6**

Describe the architecture that your team chose for your solution. What are the high-level components of your architecture? What is the responsibility of each component? Which specific products and platforms did you choose to implement these components?

Technical components - Backend, Frontend, Technologies, Programming languages and Tools used.

**Question 7**

Highlight one challenge you faced while building your code, including detail on how you addressed the issue and the technical decisions and implementations you had to make.

**Question 8**

What feedback do you have for the Google products/platforms you used? Are there any features you would like to add for those technologies?