

Google Crowdsourc and It's Strategic Content Contribution Approaches from Bangladesh

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Abstract:- Contributors do micro tasks and generate accurate data using content validation, identification, verification and recognition in the crowdsourc, which improve the quality services of Google that are being used by millions of peers. Translation and its validation, handwriting recognition and image transcription are the notable activities of the crowdsourc application which is a community effort to make Google's services better to make beneficiary the general people for the long term. Google is engaging the people of Bangladesh who are willing to help the community by improving the translation of language and the related tasks to the platform making the contributors as their part in the improvement procedure where the community tasks of contributed by the user are counted in the application platform. The contribution approach is being grown up based on the development of the contributors' community and based on level-wise perks for the contribution besides providing the Google Crowdsourc badge for the level up-gradation.

Keywords:- Crowdsourc; Content Validation; Collaborative contribution; Service Improvement.

I. INTRODUCTION

A collaborative contribution to a platform for improving its services is known as crowdsourc. Using the contributor's feedback into services, Google is developing its content through an apps platform. The contribution of users can be different types of tasks in the platform; some of them are image identification, caption verification, handwriting recognition, translation validation. A contributor can collaborate by selecting the following services provided through the crowdsourc platform, which can be solved with some tricks. Google's algorithm checks the validation of the data, which is inserted into the platform and the 'wisdom of the crowds' effect of Google checks the accuracy of data. The improvements made by the contributor to the services can be useful to Google for a long time as well as possibly the contributor also get good felling for its opinion rewards. Overall, the contribution is being enriched by which a community is being developed. This paper discusses the crowdsourc contribution procedure and it's contribution approaches from Bangladesh following the point:

- Crowdsourc tasks of Google and the details of the tasks are discussed in Section II.

- Section III presents the contribution process of a contributor and the tasks of an influencer along with the community activity.
- Contributions of contributors from Bangladesh are shown in Section IV besides their crowdsourc contribution approaches.
- Lastly, crowdsourc badge and level-wise rewards for contribution are discussed in Section V.

II. GOOGLE'S CROWDSOURCING ACTIVITY

The crowdsourc platform of Google has different types of tasks with multiple data or information [1]. The tasks or activity is driven through the Machine Learning algorithm and it is defined in 'microtasks' as it takes only a few seconds for completing. Google's crowdsourc activity includes seven major tasks, which are translating, translation validating, maps translation validating, sentiment evaluating, handwriting recognizing, image transcribing and landmarking. Fig. 1 describes the crowdsourc interface of the Google Crowdsourc web platform and in Fig. 2, all of the tasks of the crowdsourc platform are shown.

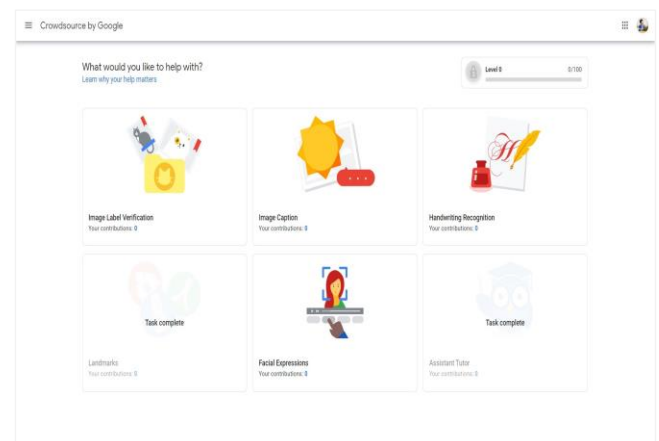


Fig. 1. Google Crowdsourc web interface

The contributor who is fluent in more than one language can contribute to the translation of crowdsourc like a Bengali contributor needs to be fluent at least Bangla and any other languages. A contributor can help the crowdsourc by making Google Translate better in the languages that the contributor speaks by translating short phrases and sentences. When she/he provides more translation, the platform can refine the translation algorithms. Phrases from a wide

variety of sources like news headlines, landmark names, and commonly used expressions can be seen, these translations make sure the Google Translate more accurate [2].

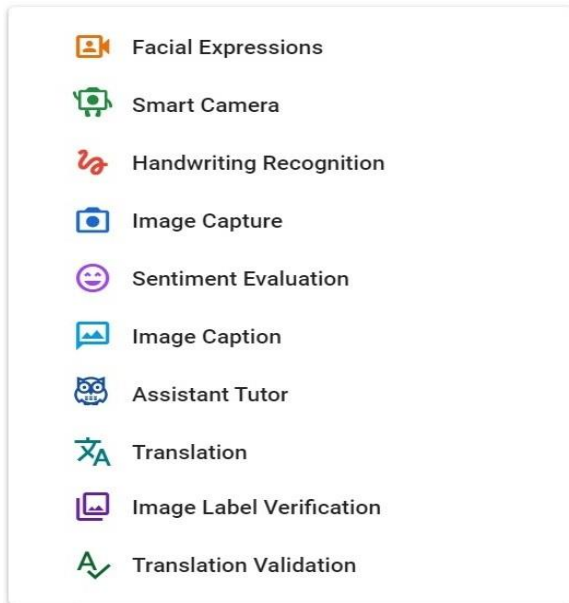


Fig. 2. Google Crowdsourcing tasks

A contributor can also contribute to translation validation following the previous tasks. Translation validation completes the procedure of the task's correction if it is correct or not. This task can be completed by translating like before just by clicking on the correct translation and avoiding the incorrect translation. It improves Google's translation capability for applications and other content. While validating translation, if the language is not found, the contributor needs to notice that many of the language names are shown in the native script of the language and it is shown up at the bottom of the list, rather than at their place in the alphabetical sort order. If a contributor knows more than two languages, she/ he can select a maximum of seven languages and can perform all the tasks except for Image Transcription that is available only in English.

Selecting words from the list of content is known as image transcription. These chosen words for the content make the images for services better and it helps to make Google Street view even more awesome by helping crowdsourcing interpret street names and building numbers found in street view images. In crowdsourcing application, some of the images have a box drawn around some text, which is used by entering the text within the box. In other cases, some street signs have text on multiple lines that can be solved by typing all the text in one line. While contributing to image transcription, if the question is ambiguous, or a contributor thinks that she/ he doesn't know the answer, she/ he can skip that question and move on to the next one using the skip option on the top right of the screen.

The reading capability of the handwritten words is called handwriting recognition that is used to read the text of images and handwritten documents. Particularly, it transcribes the handwritten words to text. This technology enables a

contributor to use handwriting gestures on phone to spell out words in the contributor's mother language. It also makes better and the Google understandable for some of the gestures that other contributors have provided. To contribute in the same, the contributor will get some handwritten text pops up in the screen, she/ he needs to recognize what is written and need to enter the text, which is handwritten. It needs to notice that this task is case-sensitive, so she/ he need to use capitalization wherever it can be seen on the other hand; translation and image transcription tasks are not case-sensitive. Sentiment analysis or evaluation is also an important part of crowdsourcing, which is used to evaluate users' various comments and reviews and it helps Google to evaluate the recommendation for a different product. Landmark identification is to confirm a landmark visible in pictures that help applications for recognizing the landmarks [8].

III. CONTRIBUTOR AND INFLUENCER

A collaborative contribution procedure happens in Google Crowdsourcing to improve the services, a imaginary view of a community contribution is shown in Fig. 3. Various tasks are contributed to the platform according to the contributor's pace. The better experiences can be gathered from Google and the other product only for the contribution of the contributors. The contributors get the opportunity to create a global network with her/ his contribution with other contributors all over the world. To accelerate the contribution activity in a community, a person can be an influencer among the others contributor to represent the community by which she/ he can be encouraging his/ her peers to contribute to Google Crowdsourcing.



Fig. 3. Collaborative contribution of Google Crowdsourcing

A contributor [12] can upgrade his/ her level by being an influencer with his best activity in a local chapter of a Crowdsourcing community. An influencer can start down the path of organizing a community of his/ her own, it's a good idea to see if a contributor exists of his/ her region or specific interest. The activity of a contributor/ influencer which is completed in level 13 of the crowdsourcing platform is featured on the Facebook page of Google Crowdsourcing. It helps if influencers are deeply familiar with the product such as having tried all the different types of questions, and achieved level 5 or above. Different communities have different passions while the contributor/ influencer enjoys the questions about pictures of different types of dogs, other contributors are passionate about languages and want to indulge in translations and sentiment analysis.

Contributing to crowdsource platform, she/ he gets many privileges like familiarity, being featured in social media. An influencer gets available to use whatever social network that works best for your community. It is generally best to engage on a medium where all the contributor/ influencer's community members to get hang out which can be Facebook, Google Groups, WhatsApp, Snapchat, etc. that helps him/ her more familiar with the community. It's generally nice to use a platform that allows easy discovery and sharing. That way, the influencer's name in the group with his/ her city/university/interest and provide some more detail and imagery, it'd be easy for potential members and other communities to find him/ her. When a contributor starts his/ her community having active members, Google declares him/ her as an influencer. And if she/ he organizes fun events and those with the community manager, they can share those on Google Crowdsources Facebook page. An influencer can organize different kinds of activities for his/ her benefits mentioned below.

Community activity of an influencer

- Contributors or influencers can connect with the global crowdsourcing community.
- Plan for community activity for campaigns, crowdsource talks, and meetups.
- Update information about community activity on the social media platform community page.

IV. CONTRIBUTION APPROACHES IN BANGLADESH

Good numbers of contributors are contributing to the Google Crowdsourcing platform from Bangladesh. The leaderboard of the crowdsourcing platform shows the contribution rate from Bangladesh which is given below. Besides, the following data is mentioned from the data of the top 100 leaders till 2020 that is mentioned in Table I. The contributors from Bangladesh believe that the crowdsourcing platform allows their contributions to benefit society in the long run and it is a fun, easy way for them to use their abilities to contribute to the building blocks of Artificial Intelligence (AI). As a member of our global community of contributors, they help to create AI that can best serve the rich and varied diversities. They gather delightful experiences in crowdsource product. Through the contribution, contributors place their position on the leaderboard of the crowdsourcing platform. To be mentioned, a total of 06 leader contributors are in 100 leader's leaderboard from Bangladesh where these 6 person's total contribution is 22729 in the task of 'Facial Expression'. In the sector of 'Smart Camera' section, there is a total of 11 numbers leader contributors who are working among the top 100 leaders where their sum of contribution is 10315.

TABLE I. CROWDSOURCE CONTRIBUTION FROM BANGLADESH, SHOWN IN LEADERBOARD TILL 2020

Sl.	Crowdsourcing Tasks	Top Contributor	Contribution
1	Facial Expression	06	22729
2	Smart Camera	11	10315
3	Handwriting Recognition	07	744721
4	Image Capture	06	22725
5	Sentimental Evaluation	06	1628818
6	Image Caption	14	1042476
7	Translation	05	108002
8	Image Label Verification	05	4538016
9	Translation Validation	09	339150

'Handwriting Recognition' task is contributed by a total of 07 leader contributors from Bangladesh whose position is among the total of 100 leaders worldwide with the total contribution number is 744721. Total 06 leader contributors are contributing to 'Image Capture' tasks with a total of 22725 among top contributors as per the data of leaderboard. The data are shown in the leaderboard of the top 100 contributors worldwide for the tasks of 'Sentimental Evaluation'. Total 14 top leaders are contributing to the tasks of 'Image Caption' with 1042476 from Bangladesh among top leaders as per the

data got from Google Crowdsourcing leaderboard. In these tasks, the contribution is the second highest from Bangladesh. 'Translation' tasks hold a total of 05 leader contributors with some 108002 number of contributions for the same statistics mentioned in the leaderboard. Total 4538016 number of contributions are contributed by the total 05 leader contributor in the task of 'Image Label Verification'. 'Translation Validation' tasks are contributed with a total of 09 leader contributors among the top 100 leaders of Google Crowdsourcing leaderboard.

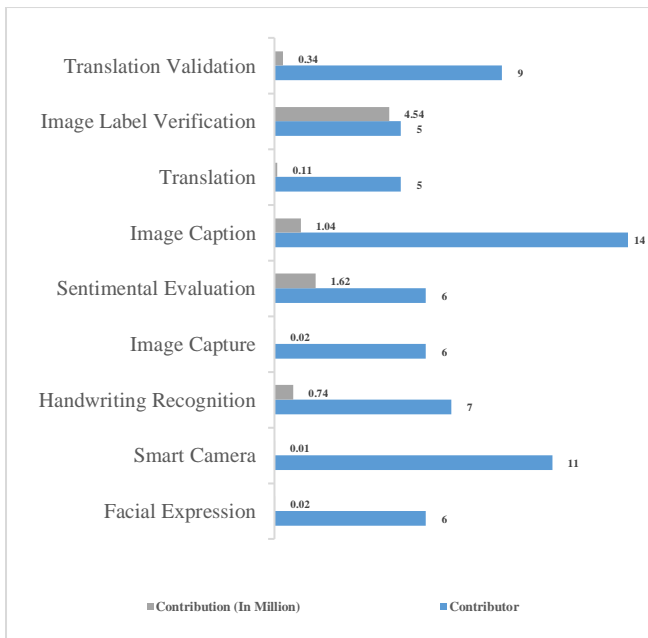


Fig. 4. Total leader contributor from Bangladesh and their contributions among top 100 leader contributor in Google Crowdsourcing

In Fig. 4, it has been shown the total number of contributors and their contributions with the bar chart where the most contributed tasks from Bangladesh is given. Their contribution quantity is given in million. Among the number of contributors still the year 2020, image contributor's contribution is the highest that is 14 from the total 100 leader contributors in each task.

V. PERKS OF CONTRIBUTOR

Community efforts of contributors from different countries are the main way to improve the Google Crowdsourcing services for that particular country where different kinds of badges are provided to the contributor for his contribution as rewards. Moreover, everybody in the world can be benefited from their contributions. Furthermore, it consists of different badges of each type of contribution by which the individual tasks can be tracked based on the contributions for a specific task. Besides, a contributor can get goodies and knowledge by joining the Google Crowdsourcing events. Based on contributions, a contributor gets a sponsored invitation to the Google Crowdsourcing Summit in Singapore or where the event is organized. There is a total of 18 levels based on the contribution in the Google Crowdsourcing platform where different types of perks are offered in six phases which are described in Fig. 5. considering the contribution quantity among them level up-gradation badge, event invitation, and certificate are notable.

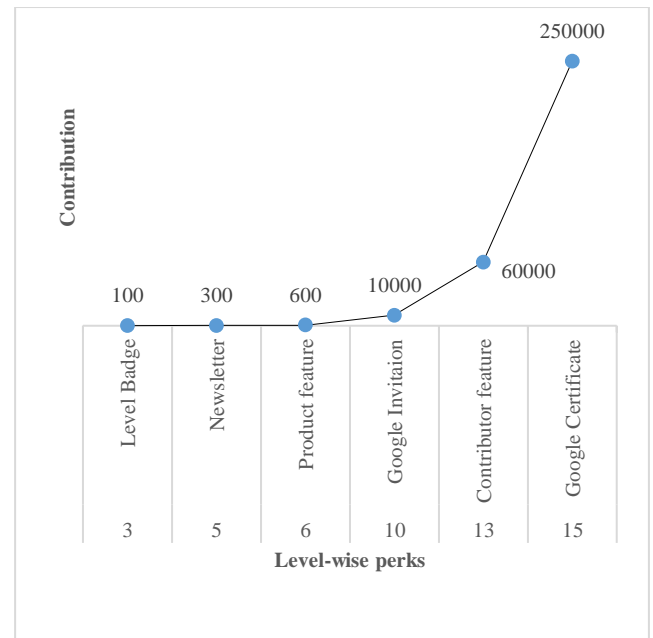


Fig. 5. Level-wise Perks for Contribution

In level 03, a badge for level up-gradation is rewarded for 100 contributions. A newsletter is disclosed to the contributor from the community for the contribution of 300 at the level of 05. Product is featured exclusively in level 06 for the contribution of 600 in the platform of crowdsourcing. At level 10, Google invites the contributor exclusively through hangout for an event for the contribution of 10000. Facebook page of crowdsourcing discloses the feature of contributor at the level 13 for contributors 60000 contributions. Google certificate for grandeur contribution in the platform is given to the contributors for his/ her 250000 contributions while she/ he is in level 15.



Fig. 6. Google Crowdsourcing badges

Various badges and certificates are given for the contribution of a contributor which is shown in Fig. 6. They are Contributor Badge for completing 20000 tasks, Pilot Badge for completing 10 online tasks, Sentiment Badge for completing sentiment task with the quantity of 1000, Scribe Badge for completing 1000 handwriting-recognition tasks, Spotter Badge for completing 1000 image label verification tasks, Good Samaritan Badge for completing 200 of tasks, Streetsmart Badge for the completion of 10 landmarks tasks, Translator Badge for completing 500 of translation, Polyglot Badge for the completion of 10 tasks in three different languages, 5K Badge for completing of 5000 of tasks, 10K Badge for 10000 of tasks, 500K Badge for the completion of

500000 of tasks, 1M Badge for 1000000 tasks and 1.5M Badge for the completion of 1500000 tasks which is given in TABLE I.

TABLE II. CROWDSOURCE BADGE FOR CONTRIBUTION

Sl.	Badge	Contribution Activity/ Tasks	Contribution Quantity
	(e-Badge)	Type	(In thousands)
01	Contributor	Contribution	20
02	Photographer	Image capture	0.5
03	Pilot	Online task	0.01
04	Sentiment	Sentiments tasks	1
05	Scribe	Handwriting recognition	1
06	Spotter	Image label verification	1
07	Good Samaritan	Task completion	0.2
08	Streetsmart	Landmark	0.01
09	Translator	Translation	0.5
10	Polyglot	Three different languages	0.01
10	5K	Completion	5
11	10K	Completion	10
12	500K	Completion	500
13	1M	Completion	1000
14	1.5M	Completion	1500

VI. CONCLUSION

Google Crowdsourcing has had less than 1 million downloads from Google Play where it has an average of 4.4 stars. Its clever algorithms cover the procedure of overall development through contributions which is the main idea of this platform. Its algorithm works slightly differently following the reward scheme of an electronic badge and level up-gradation rewards. The same approach is applied to contributors from Bangladesh. Each time getting contributions from them, the platform is being more inclusive for the coming years. Google Crowdsourcing says that “Whether you’re on the train, at a bus stop or waiting in a queue, take some time to make Google better for your local community.” where a contributor named ‘Ethan Dale’ reviewed 5 stars in the Google Play with the following comment, “Weirdly fun, a time killer that benefits others. I always want the collective information of the world to be improved. This helps me do it, and it's super entertaining too. I like it, and it's a more beneficial and better use of time than some random cash grabs mobile game.” The voluntary contribution will make Google better in the contributor’s part of the world.

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