

आशा

(Hope)

Ideation Entry for
GHCI 20 Codeathon

Prepared by **EstrogenExpress**

Chosen Problem Statement

There is no second opinion about the crucial role that education plays in shaping an individual's personality. As per a survey revealing, India's organized sector has only 34 million people which forms a very small strata of the total population. This statement itself says a lot about the Indian literacy rate and the education system.

Even though India's literacy rate has registered some growth over the last few years, but it has not been able to impart the kind of education that modern times demand. One of the major reason for this is lack of modern literature in regional dialects. Rural people are often discouraged and demotivated towards education due to this reason.

We will be exploring and innovating in the field of education especially solutions to help students in the regional areas.

Who are we ?

Team Name: Estrogen Express



Ishi Patel



Garima Bothra



Hrishita Chakrabarti

Idea



Using technology to break one barrier at a time. This time we target the language barrier. Introducing आशा(Aasha) - our proposed solution for quick language translation in the domain of academia. **With our app, the user only needs to click a picture of the text/ select the books and pdfs they wish to translate and the app will return a well formatted translated version of the text.**

No longer will rural scholars have to worry about picking up a brand new language just to gain the insights of those preceding them. We believe that every person is the most comfortable working and learning in their L1 language and thus through this easy to use translation app, learners and enthusiasts can explore content from across the globe in the comforts of their own L1 language. Those looking for a noble hobby during this pandemic may also use this app to teach their underprivileged counterparts concepts in their own mother tongue to create a sense of familiarity with foreign academic jargon.

Technology Used

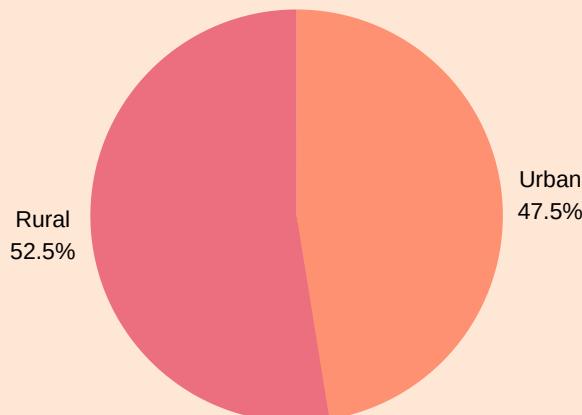
We will focus on developing an end to end product with mobile and web application service.

For text recognition we will use state-of-the-art OCR services by Google Vision API. For language translation we will use Google Translate for the prototype. We will use a common backend and database functionalities for app and web service such as Firebase. Swift, SwiftUI, XCode will be languages used for app development. Django/Flask for rest API service. For the frontend we keep it as simple and intuitive as possible for the user using frameworks like Bootstrap / SemanticUI

Intended Approach

Our product is mainly going to be a mobile application seeing rise of smart phone users in the rural areas. We will also have a web based platform for convenience of teaching at schools. In the prototype version for this hack we will use translation services of Google Translate , but as we scale we would like to take help of linguistics to make more inclusive APIs for the same.

Smartphone users with Internet accessibility in India 2019



Upcoming Challenges



Make a product that can help bridge the gap in education caused due to difference in language by providing books in regional languages.



Make the product available in as many languages as possible so that the users do not run into the language barriers that the app aims to break.



Along with making it available to users speaking different languages, we plan to make our product available to people with disabilities like the blind as well.

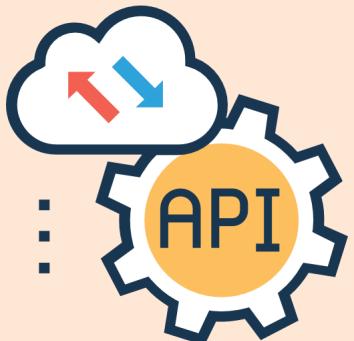
Innovation

Language is a major part of any culture. With this hack we are not only promoting education but also preserving cultures by encouraging users to learn in regional languages / dialects itself. India being one the most diverse countries with more than 100+ identified languages must definitely work on protecting, preserving and promoting each and every culture as the perfect example of ***Unity in Diversity***.

Individual Roles within the Team



Garima, our iOS developer will be working on the **iOS App**. She will work on the end to end integration of the app with the APIs. Her main aim is to make sure the app caters to the needs of the users.



Iishi, our **backend** developer will take care of integrating GCP and its OCR and translation services into the project as well as making relevant APIs for the usage at both web and app front.



Hrishita, our frontend developer and content writer will take care of the entire **website** which includes integration, design and content management for the entire project.