

This doc contains the details regarding the roadmap for phase 2 of the BTP project.

Currently existing features (alpha) (built till phase 1)

- An **android app** with which we can
 - User login and signup
 - Collect user voice samples for sentences from a particular hardcoded database
 - Random allocation of the models for users
- An admin **web dashboard**
 - Batch and multi-select export a users voice recorded samples
 - Stats to show the number of audio samples recorded by week/month/year/all-time
 - Stats to indicate the number of users joined by week/month/year/all-time

Technologies used till now

- Flutter (for the android app)
- Flask, python (for the server)
- Celery, Redis (as background task queue)

Roadmap for beta

- Add admin email support
 - Send emails to self
 - Normal Gmail (alpha 1)
 - Custom SMTP server(alpha 2)
 - Finalize (beta 0)
- Modular database plugin (**IMPLEMENTED**)
 - Admin can upload databases from the admin console
 - Support multiple language databases
 - Mixed sentences (pairs)
- Decide on whether we want to host a centralized hub for others to join as admins for their respective organizations or just give client and server code away for organizations (clarify?)
 - Central organization dashboard
 - Public and private organizations (?)
 - Allows no need for requesting data from public organizations
 - Text and voice dataset requests from other organizations
 - “Join a private organization” option in the app.

- Organization dashboard (**THIS WEEK**)
 - Custom server url
 - Custom SMTP server url (?)
 - Custom client source requests (clarify ?)
 - Central dashboard for managing meta-organizations
- Stats
 - Users
 - Datasets
 - Each sample text
 - Low voice sampled texts based on thresholds (params)
 - Config page on the admin (organization) console to set thresholds
 - (clarify ?)
- Encrypt files by a private organization (clarify ?)
 - Requires open-sourcing the client code
 - Required because organization privacy issues (clarify?)
- App (**THIS WEEK**)
 - Login via central server or organization server (clarify?)
 - Home page
 - Select by language (after implementing mixed we can also select by a group of languages)
- Concurrent user load testing (**NOT WORTH IT Before Deploying**)
 - Final load testing
 - Write scripts to query the server and show server performance stats as graphs (alpha 0)
 - On a local machine (note down specs)
 - On a Heroku or some cloud service
 - On the final deploy stage (unknown as of now)
 - Server load stats on the admin console (low priority)
- Sentry error reporting setup for both app and server
 - Sentry is very useful to catch future bugs on both server and the app
 - Custom sentry config on the admin console (clarify ?)
- Publishing to app stores (clarify ?)
 - Play Store requires google play account worth 25\$ (clarify ?)
 - App store requires more and I have no Mac and ios which are required to build an ios app (clarify?)

NOTE: The technical details for each feature that's implemented can be found on the README files of the particular directories

TODO:

- Add a way of generating docs for organizations and client users
 - Server
 - Central Server
 - Client apps
 - Any API protocol docs for custom clients

The following information is a PART of the current or future ROADMAPS

Miscellaneous Information regarding the server operation:

- The Public Organizations here are like Open Source organizations where they can provide their own corpora usage License.
- If the corpora usage license doesn't fall under the spirit of open source the organization will be asked to convert into a private organization which only leeches off the data along with others' data.
- The Central Dashboard only acts as a metadata manager and has no corpora collecting capabilities
- The users of the central dashboard are the owners of the central server and no one else.
- But some API endpoints and some forms will be exposed to the public like the registration form for new organizations, delete organization or Unlink organization from the central server, api endpoints to the organization servers to verify the server identity, etc.
- The Privacy Policy for the Central Dashboard needs to be present and it applies only to the users(organizations) of the Central Dashboard. We do not collect any data for private organizations except from the analytical data and whereas for the public organizations we have everything.
- Privacy policy for the client apps
 - The organization which manages the client is responsible for the privacy policy. Incase of the official one IIIT Hyderabad is.
 - We collect the voice samples they provide, valid or not. So they should make sure they don't record anything that could personally identify them

- We make it clear that their voice samples will stay public and are openly left to the internet under the license terms of the organization which they recorded the sample for.
- The users thus can stay as either a private user or a public user which are categorized as follows:
 - The public user's every voice sample provided will be publicly accessible to every organization under the original organization's corpora usage license.
 - The private user's voice samples are only available to the original organization and they are entitled to not leak those voice samples to the internet and will be stripped of their position as an organization once they are found guilty of releasing the private voice samples from the user to public, either it be a public or private organization.
- Valid voice sample here indicates that it is in fact not gibberish and corresponds to the sentence they uttered.
- Terms of service
 - Undecided
- Data control for the users
 - The users as of now (initial version) cannot choose to delete their samples once they record it and are requested to contact support if they wish to remove those.
 - Plan for the future is they can choose for every or all voice samples they've provided till now they can make it either public or private
 - A user can login as guest and record samples but even in that case the guest user can either choose to be a public or private user
 - Note: A guest user will have an UID(unique identifier) which is required as per the many use cases of datasets
 - The difference between a guest user and a normal user is the guest user need not provide any personal information like gender, DOB.
 - If some organization datasets require these they will be prompted to enter those
- Organization dataset categories and dataset requirements manifest
 - Every organization has their own configurations and requirements for the collection for corpora which is useful for them so we provide a manifest for each organization
 - The manifest contains all the info they need from an user for that particular dataset eg. Age, Gender may be required for some dataset

- Custom fields can also be added so the manifest is thus fetched dynamically from the server and based on the fields the UI shows the information form to the users
- The manifest may contain some private fields which are not to be exposed to the public like email, DOB or phone no based on the organization's requirements. So every custom manifest field will need to be manually verified by the organization responsible for the client apps which shows this dataset to the users.
- There will be a manifest dashboard page within the organization server which upon adding/updating a field will add it to the verification queue and upon deletion marks the field as deleted but any previous data that's been collected will remain so.
- The users can see all the information they've entered for each dataset of each organization **(UI)**
- Customer Support
 - For Organizations
 - The organization customer support as of now (initial version) can only be via email
 - Planned: An internal chat with image, link embed support with the central server support team
 - For client users
 - After the central organization looking at the problem the request will be forwarded to the particular organization if the query/ issue is related to some particular dataset
 - In case of signup/login issues they will be directly forwarded from the signup/login page to the organization's customer support where they can determine if there are any issues on their side and forward it to the central server support team if necessary.
- Login and Security
 - The users login can be very crucial for security reasons
 - If one organization server is compromised the central server shouldn't be responsible for it
 - Whereas if the central server is compromised the organizations and users shouldn't get affected
 - Considering the above cases it is best to have an organization based sign in for users
 - Current procedure as of now
 - Guest users are handled via the central server as they will be safe if there's any breaches

- The regular users are required to login every time for every organization but the clients will ask to auto fill any previous login details
- Custom clients are any 3rd party clients which use our API endpoints
 - Or any forks of the official client's codebase

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This document belongs to LTRC, Speech Processing Lab. IIIT Hyderabad.