

# DELOITTE TECHNOUTSAV 3.0 2020

Smart Feedback System for  
IOT device feed

**Team Cratos**



# Problem Identification

The main problem that we identified was that the current system of taking feedback from customers was very archaic and prone to misinterpretations.

Survey forms and questionnaires only go as far as the accuracy of detecting customer's actual mood and intentions is concerned. We hope to address this issue by upgrading the system used to collect feedback.

## Proposed Solution

We plan to partner with Software and Hardware firms by integrating our solution which aims at helping customers as well as businesses gain valuable feedback through sentiment analysis helping them to assess potential churn and also provide data to help them prioritize customer needs in the process.

On the software front, we've deployed a pilot, aimed at assisting students/professionals/companies get best feedback for their specific use cases. Thereby generating revenues through the integration.



# Software Description

Ours is a simple web app where the user will go to check his proficiency in giving time-based interviews through our feedback system.

- Our chat assistant will be prompted after the form details are submitted by the user.
- We would in the process of our virtual interview through our assistant, record the heart rate, pulse rate and body temperature of the person in interview.
- We would then chart the response in a graphical manner to show him the questions which made him uncomfortable and the ratio of his easiness in answering the question and the success rate.
- The use of smart devices connected over the internet will help us analyze the physical situation of the user while answering the questions.
- Provide various solution to the problem faced by them during the process of the interview.



# Business plan

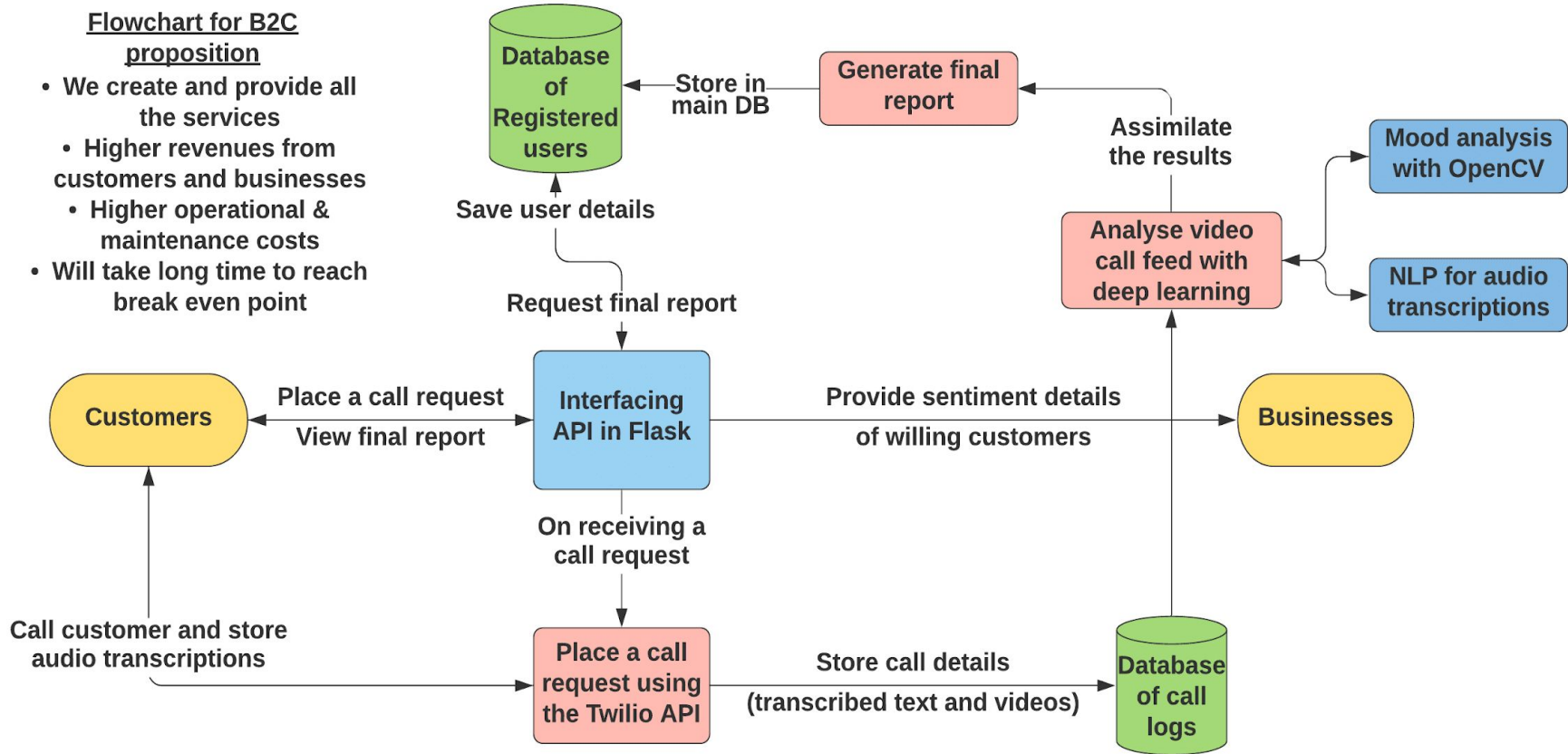
The crux of our project is increasing customer satisfaction with our product and provide them valuable feedbacks. We have two propositions that will be the backbone of the finances supporting our idea. A detailed overview of both the business models and their corresponding software pipelines are provided in the following flowchart.

**B2B:** We can provide our API to service firm such as telecom companies, who would benefit from the product as an added USP against their competitions. Our product can help reduce their churns and increase their satisfaction

**B2C:** We create a standalone services, including the webpages as well as databases for storage and provide them directly to customers as a service. We can use a freemium model, charging customers for special services like increased number of minutes of video call/linking their demands to businesses. (Linking job seekers to hirers)

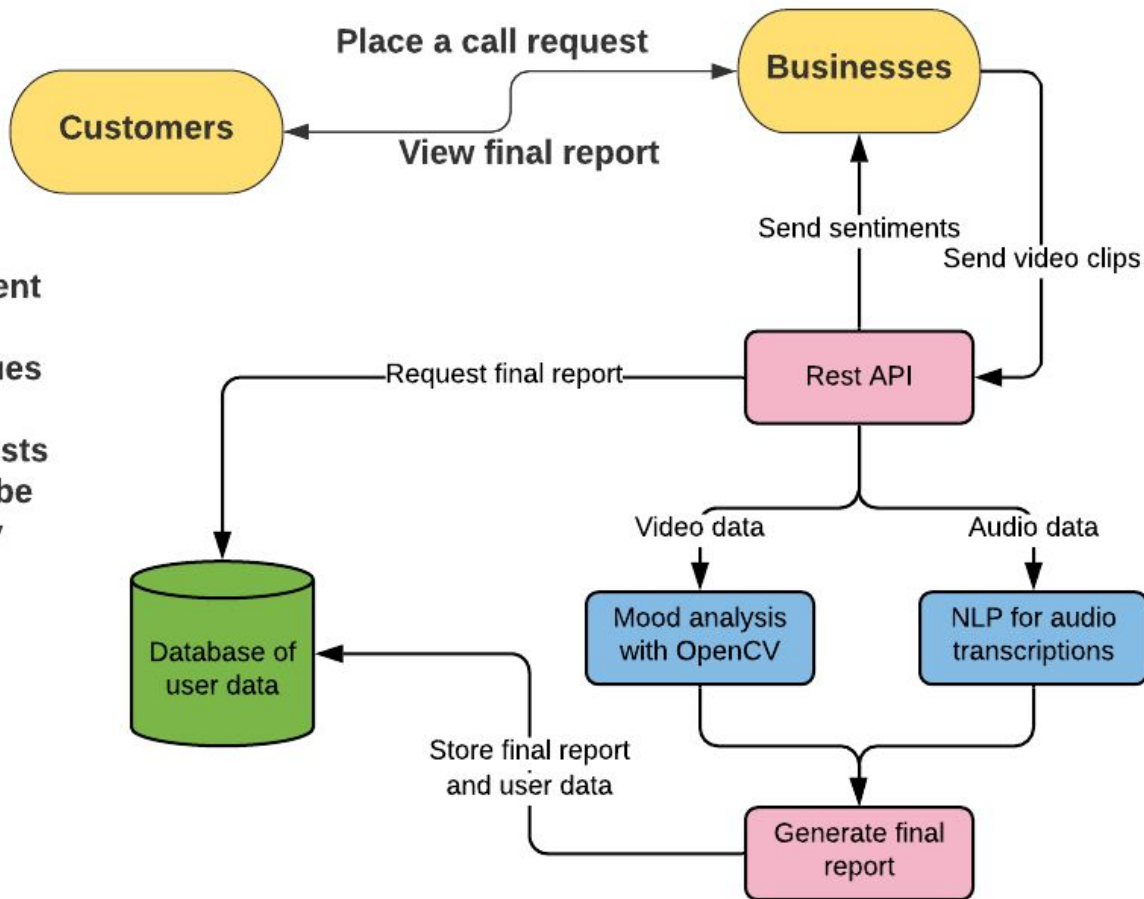
### Flowchart for B2C proposition

- We create and provide all the services
  - Higher revenues from customers and businesses
  - Higher operational & maintenance costs
- Will take long time to reach break even point



### Flowchart for B2B proposition

- We provide the sentiment analysis API
- Relatively lower revenues than B2C
- Very low operational costs
- Break Even Point can be reached very quickly





## Impact and value proposition for the users

The users will have benefits across multiple fronts, some of them include:

**Financial Inclusion:** Users who don't have resources to prepare for interviews or practice learning speech can achieve relevant expertise without spending a fortune.

**Education:** This will help them time themselves in pressure situations and will help them analyze weak points and improve upon that.

## Impact and value proposition for businesses

**Prioritization:** Businesses can plan on the basis of data available to prioritize according to user alignment.

**Increase customer satisfaction:** Businesses can increase customer satisfaction by evaluating through our feedback system.

**Reduce customer churn:** Businesses can use our solution as a USP, giving them an edge over their competition, hence reducing overall customer churn.



# Technologies used

## Product Creation

- HTML/CSS (Frontend Framework)
- Flask (Backend)
- AWS (Database)
- Python (Spacy, Rasa and OpenCV)
- R (Data Visualization/Report generation)
- Gensim/Wit (NLP/ Sentiment Analysis)
- Twilio (programmatically make and receive phone calls, send and receive text messages, and perform other communication functions using its web service API.)

## Security

- Spam detection in the app through AKISMET.
- Captcha feature to reduce bot feedback.
- Secure from CSRF attacks.





# Future prospects

We plan to extend the service to common wearables like smartwatches, smartphones and also common devices having microphone access through voice call or over the internet.

- Calculating the pulse rate.
- Calculating the spikes in heartbeat.

Through both the pilots, we're gathering customer feedback, and understanding their pain points, to improve upon our value proposition for them.

Hardware components:

- Internet connected wearables
- HRM (heart rate monitor)
- PRM (Pulse rate monitor)

On the hardware front, we're planning to run a pilot in partnership with businesses to help students understand their specifics well without the need for human assistance and also for the businesses to gain relevant knowledge about their customers.



# Summary

Our solution will help create a multi-dimensional impact across different segments, boosting the technological penetration in the country, and driving real change for its millions of users.