**Project Proposal**

**ABSTRACT**

This project is about to collect data from different users. In which we have a different number of pages such as user\_info API and home\_API.

**WHAT IS SWIPE\_GESTURE?**

Swipe: User swipes quickly over the smartphone touchscreen device. Can be from left-to-right, from right-to-left, from top to bottom, from bottom to top.

Or

A swipe is when you touch and slide your finger across the screen.

**INSTRUCTIONS**

I will provide you the script with database backup on GITHUB.

On user\_info.html page will consist on these fields such as:

1: Gender

2: Age

3: Hand > Left Hand, Right Hand, Both Hands, Right\_Index, Left\_Index, Right\_Thumb, Left\_Thumb

4: Touchscreen Device: iPhone, Android, Tablet, iPad.

* Each user will have unique user\_id since the user enter into the application session. The application session will be started from user\_info page to onwards. Not from Instructions page.
* When the user will start to use application, we need to store each real time swipe\_gesture of specifically both pages user\_info API and home\_API by using Javascript into the databases before submitting the form or when user will out of session. Backend of the application must be in Python.
* The organization of the application will be intro.html > user\_info.html > home.html > thank\_you.html
* The application will be able to translate English to Spanish and Spanish to English.
* These gestures will be classified based on the starting and end points of the collected x - y coordinates.
* System will be able to capture the swipe\_gestures automatically of each participant and store real time data into the Database.
* I have added some js events in swipe\_gesture.js you may check it as well.

1. How much time user has spent on our application? It should be in seconds.

Moreover, you have to store the timing calculations of the following features into the databases that I have mentioned the features following.

**TASKS TO DO**

• Restrict the user that he can’t go back after submitting the form.

You need to create a postgresql database with two tables:

**1: user\_info** in which the attributes will be:

user\_id(PK) , gender, age, handedness, touchscreen\_device, browser.

**2: swipe\_gestures**

user\_id(FK), left\_to\_right, right\_to\_left, scroll\_up, scroll\_down, zoom\_in, zoom\_out, swipe\_width, swiping\_repetitions\_x\_coordinate, swiping\_repetitions\_y\_coordinate, total\_number\_of\_clicks, x\_coordinate\_ clicks, y\_coordinate\_ clicks, total\_time\_taken, velocity, device\_screen\_width, max\_swipe\_speed, min\_swipe\_speed, finger\_size, hand\_movement, device\_orientation, grasp

• Need to build a relation of tables regarding the individual user. Such as in the whole session what the specifically user has performed with the swipe gestures and it will store the data on the basis of the user\_id into the different tables.

• Need to calculate these features and store their timings in each required fields in database such as:

Swipe time (Each swipe time taken/Total length of swipe)

1. Left to right swipe (left\_to\_right)
2. Right to left swipe (right\_to\_left)
3. Scroll up (scroll\_up)
4. Scroll down (scroll\_down)
5. Zoom-in (zoom\_in)
6. Zoom-out (zoom\_out)
7. Swiping repetitions(swiping\_repetitions): How many times user has repeat the swipe\_gesture in x\_coordinate and y\_coordinate. Such as 10 times in x-dimension and 40 times in y-dimension
8. Total number of taps/clicks of each user throughout using the application (total\_number\_of\_taps)
9. Touch coordinate (x and y): In which we have to store all clicks x-dimension clicks on (x\_coordinate) and y-dimension clicks (y\_coordinate).
10. Total Time taken while using application till submitting (total\_time\_taken)
11. Speed/Velocity (velocity)
12. Width of each swipe (swipe\_width)
13. Maximum Speed of swipe (max\_swipe\_speed)
14. Minimum Speed of swipe (min\_swipe\_speed)
15. Finger size (finger\_size)
16. Hand movement (hand\_movement): Which hand is using right, left or both hands.
17. Orientation (device\_orientation): Landscape or Portrait
18. Grasp (Smartphone holding pattern)

The left hand with left thumb input (“left-single”), held in the right hand with right thumb input (“right-single”), cradled in the left hand with right finger input (“left-cradled”), cradled in the right hand with left finger input (“right-cradled”), two-handed with two thumb input (“two-handed”).