



School of Computer Science and Engineering

Product Analysis Website using facial emotion recognition and text sentiment analysis

Submitted By

Ashish Thapa	18BCE2395
Bajrang Prasad Sah	18BCE2469
Krishna Sah Teli	18BCE2475
Govinda Yadav	18BCE2478

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Dr. Shashank Mouli Satapathy

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1. Project Overview

Product review website is a platform where the companies can get their products reviewed. We are currently focusing on the products that are on the process of coming into the market. We act as a bridge between the company and the reviewers. We provide the company the review and the reviewers some incentives as a gift for their valuable time. The website is specially for those companies who donot have a robust product analysis team for getting insights on the products that they are going to release in the market.

Talking about the website, it can be divided into two parts. One is the platform for the reviewers and another is the platform for the company. The basic flow is that the company will upload the product images along with its details and the reviewers will review them. In the company dashboard, the company will have option to upload products and the option to view the review results. The company will be asked questions on the basis of the type of product they will choose to upload. Similarly, the result section will totally be graphical. The reviewer will be asked questions on the basis of the products. The answers retrieved from the reviewers will be graphically shown to the company. In the reviewer section, the reviewer will be shown products to be reviewed. The products will be shown as per the choice made by the reviewer for the interested product type during the sign up process. After the reviewer starts the review process, the reviewer will first be shown a slideshow of pictures of the product. During the slideshow, the facial emotion of the reviewer will be captured by the cnn model trained by us. After the slideshow, the reviewer will be redirected to the page where the description of the product will be displayed. After this the reviewer will be asked a few questions that will differ as per the product type. The questions will be a combination of both objective and subjective. The answer received from the subjective questions will be combined and a sentiment analysis will be done on it.

The site is developed on Django framework . The backend is written in python whereas the front end is developed using html, css and javascript.

2. Introduction

A company has to do a lot of survey to do get the general public review for the product that they have built. It is both an expensive and a time consuming process. So, we have decided to bridge the companies with their potential clients to make their review process easier. We have decided to build a website tailored for this purpose. We have decide to combine the sentiment analysis process with the review process to make it more effective and trustworthy. We will track the facial emotion of the reviewers in real time while we display the product or while they read something about the product in our site and we will also analyze their sentiment through the answers they give to our tailored questions. Then we will combine both the parts of the analysis and give the final report of the product to the companies. We also see that it is difficult for the companies to analyze the data and they require extra experts. So, we also have decided to visually represent the data in different categories due to which companies will require less analysts for the analyzation process.

3. Background/Related Work

[a] This paper purposes to record facial expression while people observe products in supermarket. The adopted modified Harris algorithm for facial expression detection instead of Harris algorithm and came to conclusion that modified Harris algorithm makes the process faster as it has lesser time complexity. Their model was based on GENKI-4K Database where photos are labelled as smiling or not. They have mentioned that this method can be adopted for online shopping and prediction of earlier failure of products but haven't provided any assurity about it's successful implementation.

[b] The paper purposes an LSTM based text sentiment model along with CNN model for facial emotion recognition. The paper discusses on how the traditional way of taking the surveys and reviews can be revolutionized. They purpose to do live recordings during the product launch and doing the analysis on the video to capture the overall sentiment and purpose market strategies according to the analysis report.

[c] The paper gives a brief analysis on the relation between facial emotion and the product likeliness and product sell rate. They took a survey where they deployed facial emotion recognition model. The survey contained a video related to a specific product. Along with the video the question for likeliness and regarding whether they would buy or not was asked. They survey recorded 12,230 responses for 170 different ads in total. Then, they studied the interrelationship between these 3 factors and used the data obtained from the survey to develop a model to predict ad likeliness and purchase intent of customer.

[d] They purposed a CNN architecture for emotion recognition. They combined three datasets to make a custom dataset. They merged JAFE, KDEF and their own custom dataset. With this dataset, they were able to get validation accuracy of 91%.

[e] The authors shows how Amazon Rekognition can be implemented in online shopping websites to show products as per the customer's website. They studied the easiness in implementation of the api and it's effectiveness. They also developed an architecture where the ads can be displayed in the screens in supermarkets as per the sentiments of the customer.

[f] The paper focuses on development of facial expressions recognition analyzer and it's implementation for product appreciations. It uses the Active Appearance Model to detect the different facial regions like nose, eyes, mouth, etc. Then they extracted the relevant information around the facial regions detected using optical flow estimation method. They have not tested the technologies in real time environment and expressed their willingness to do so.

[g] Pepper can identify customers' age, gender and facial expressions and is able to recognize and remember individual faces. She can show you products you're looking for using voice recognition and a built-in tablet. If you smile, she may show you more features. If you frown, she may switch to another product

[h] It is a product similar to our platform. They do second wise emotion analysis for the videos. They provide insights on videos as per the viewers emotion analysis. They are mainly implemented on ad videos of product.

4. Real-Life Applicability

Before launching a product every company has to do a market research in order to predict their products outcome. Many companies conduct surveys for their product looks and features with the numerous random people in different locations. The process itself has its own expenses and also some skilled manpower and techniques are required for it. So, we are here with our platform to make this process easier. It is not that every company has infrastructures to conduct this type of reviews with the customers. Many companies are in the startup phase and many are unaware about the process or have less budget to spend. So, our platform is applicable for this type of companies.

i. Applicability on the basis of types company:

- a. Startups: Many startups have less budget to spend. So, they can use our system to get their products analyzed before launch and make improvements in their product as per the results
- b. Established Companies: Many of this type of companies already have a research team, but they are always open to newer viewpoints. So, they can use us to check the public's prespective in a more general way.

ii. Applicability on the basis of current pandemic situation:

Now, taking the current pandemic situation, every company either startup or well established is facing difficulties in gathering viewpoints of the people prespective for their newer products. The lockdown enforced or the social distancing rule has made the process go online. So, for this our platform would be better.

iii. Applicability for location purposes

Whenever a company is launching a product for the global market(or say whole country), the viewpoint of the people from many places is important for the review

before it's launch to improve the product. It might be difficult for the company to conduct this process with this much diversification of people. But, our platform can also be a solution to this.

5. Individual Contribution

Ashish Thapa: Backend(Django framework implementation,databases),Model

Creation , design of website, css

Bajrang Prasad Sah: CSS, Design of website

Krishna Sah Teli: HTML and Javascript

Govinda Yadav: HTML and Javascript

6. Tools and Technologies used:

For Frontend: HTML,CSS and Javascript

For Backend: Django and SQL

Packages used:

Keras: for CNN network architecture

TextBlob: for text sentiment analysis

Google chart api: For chart creation

Dataset used:

FER2013

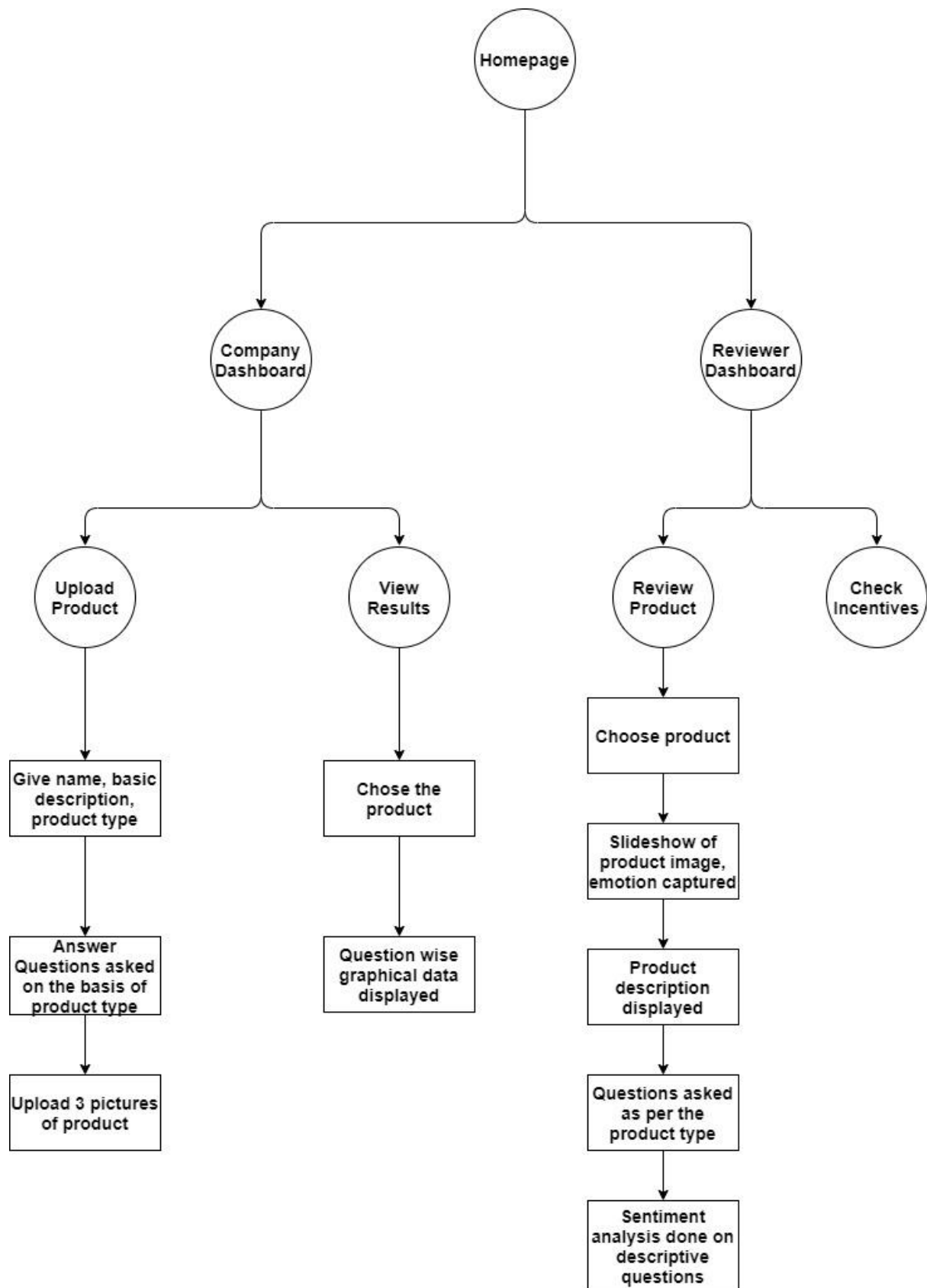
Software Requirements:

Latest version of chrome along with proper functioning webcam.

Hardware Requirements:

PC with webcam

7. Proposed flow of the project



8. Working Methodology

The project was built on Django framework(uses python). The front end templates were made using HTML,CSS and javascript. The SQL database was also handled by the Django framework. The CNN model was trained and was loaded in the backend using Django.

First of all the dataset FER2013 to be used for training the model was pre processed. The data was in csv format. So it was converted to matrix form to represent images of size 48*48 pixels. Then the matrix was normalized, and other processing was done as required. Now, the architecture of CNN model was designed. We used a series of 16 convolution layers with batch normalization, max pooling and drop out where needed. Upon training and testing we achieved an accuracy of 67.96% which is quite good for FER dataset as human accuracy rate for this dataset is about 65%.

Secondly, we used textblob library for text sentiment analysis. We decided to combine all the textual answers given by the particular reviewer and pass it to the textblob sentiment analysis for the text sentiment.

The Databases used were created using python in the Django Framework. Similarly, the redirection of webpages were also controlled through Django.

Now talking about the working of the overall website, we have to discuss about the two modules:

a. Company module

The company has the feature of uploading the product and checking the review of the products.

i. Uploading the products

- First the company gives the basic description,name and type of the product
- Now, as per the type of theproduct, the company is asked questions about the product For Example, if the company is uploading a bike, then the company will be asked the Questions related to vechile.
- The company will be asked to upload three pictures of the product.

ii. Results view

- First the company chooses which product to check result for.
- The results will be shown question wise asked to the reviewer

b. Reviewer module

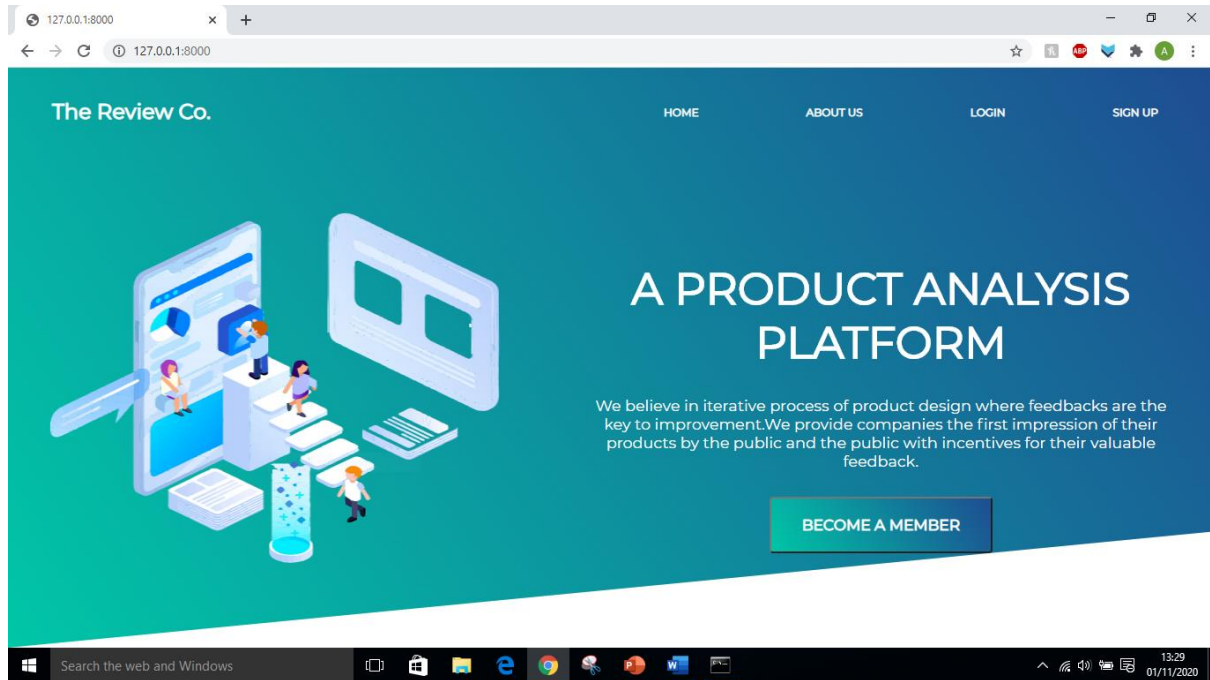
The main work of the reviewer is to give review. Here, the only products of the type that the reviewer chose during the review process will be shown. During the review process,the reviewer will be shown a slideshow of pictures of products duringwhich the reviewer's facial emotion will be recorded. After

this, the product description will be shown and the questions related to the products will be asked. If any textual answers given, then the text sentiment analysis will be done.

9. Implementation Results and User Interfaces

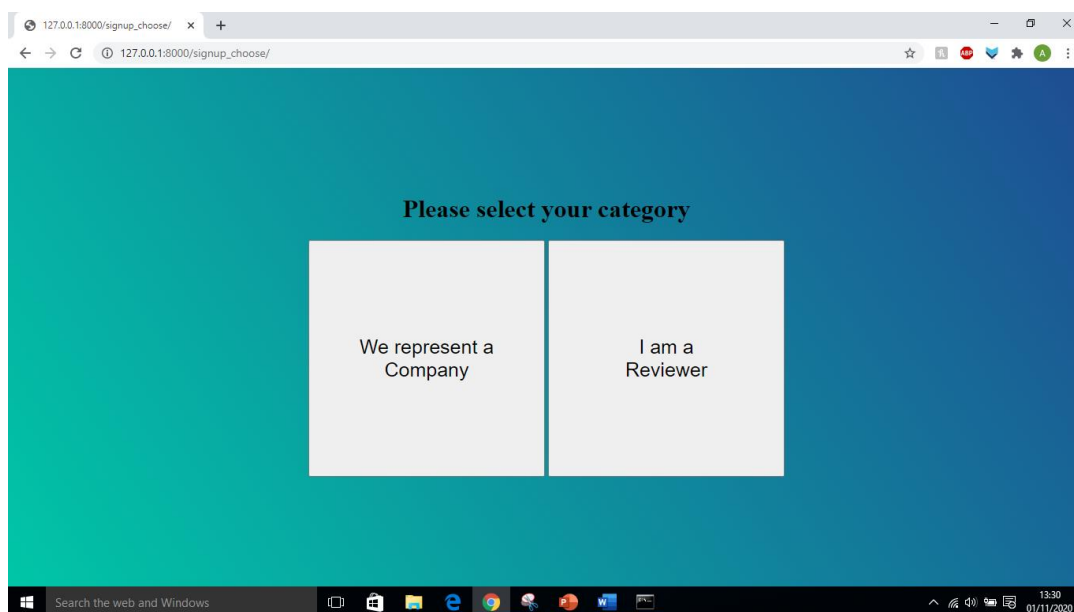
i. Homepage

It is the homepage of our website. It has links to login, signup and about us page. We have tried to keep it as simple as possible.



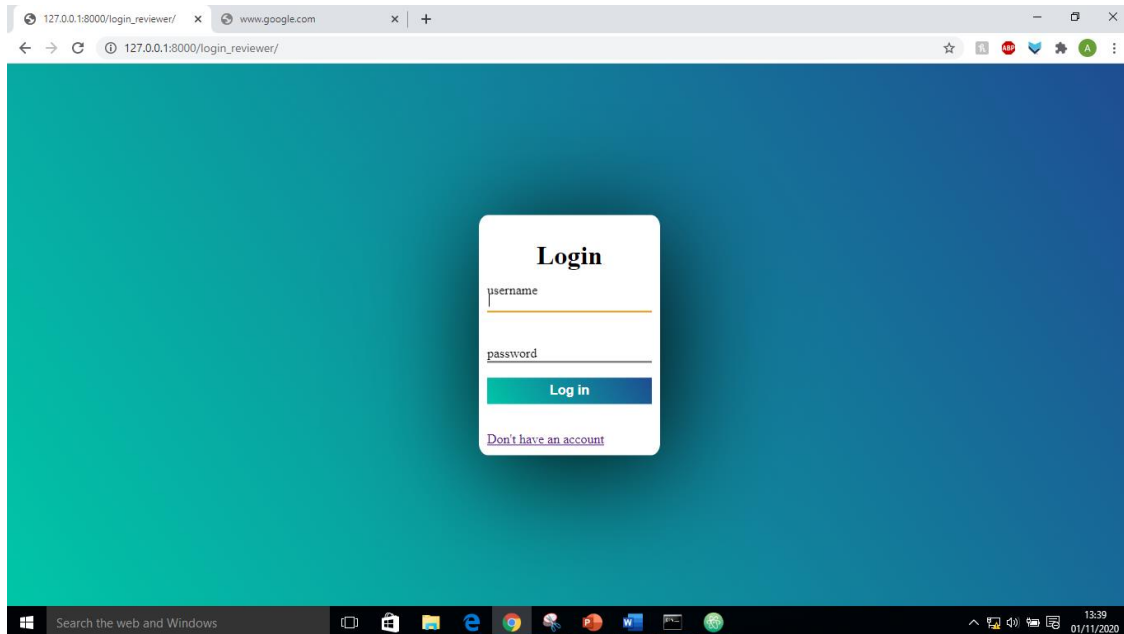
ii. Choose reviewer/company

After you choose login or sign up option, you will be provided the option to choose a category



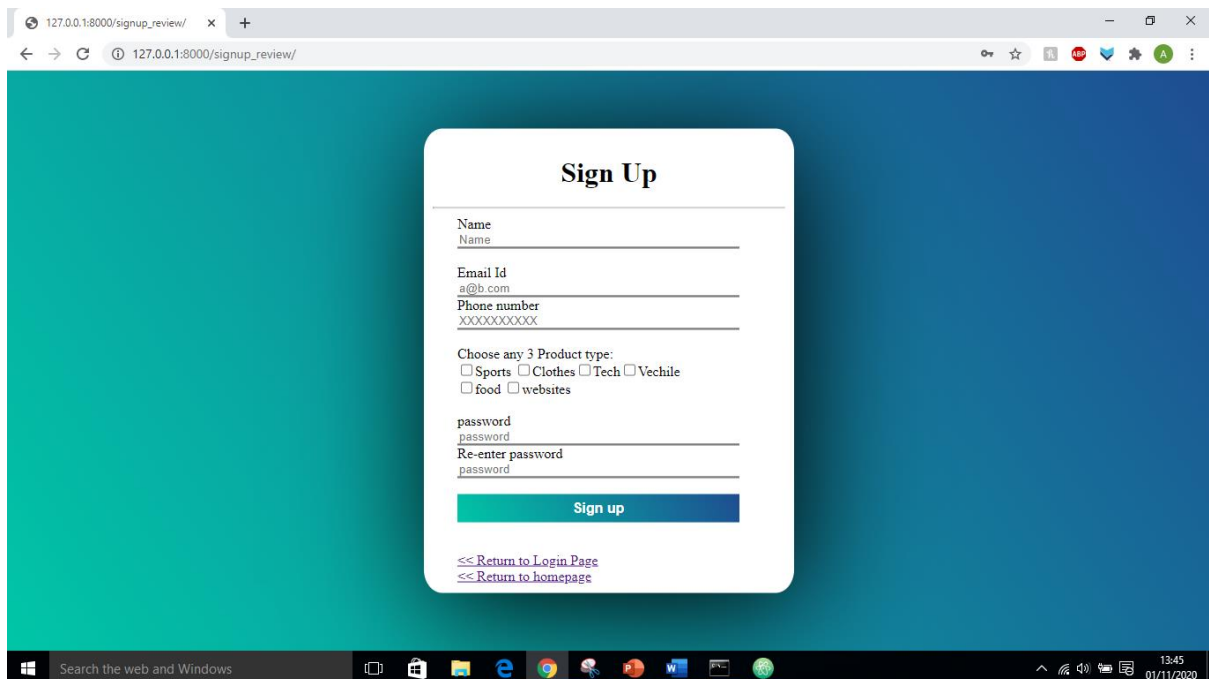
iii. Login page

This is a basic login format. Once, you click the username option the username label shifts upwards and you can type the username below it. Similar is the animation for password



iv. Signup(Reviewer)

Below is the signup page. It validates the input in the same time user enters his details to prevent errors. The example for validation is shown in next picture.



127.0.0.1:8000/signup_review/

Sign Up

Name
ashish

Email Id
asad
your email is invalid

Phone number
900348
please enter a valid 10 digit number

Choose any 3 Product type:
☐ Sports ☐ Clothes ☐ Tech ☐ Vechile
☐ food ☐ websites

password

 *length must be greater than 8
 *must contain a digit

Re-enter password
password

Sign up

<< Return to Login Page
 << Return to homepage

v. Signup(company)

It is just like the above signup page and has the same validation features as above.

127.0.0.1:8000/signup_company/

Sign Up

Name
Ram Thapa

Email Id
abc@xyz.com

Phone number
XXXXXXXXXX

password
password

Re-enter password
password

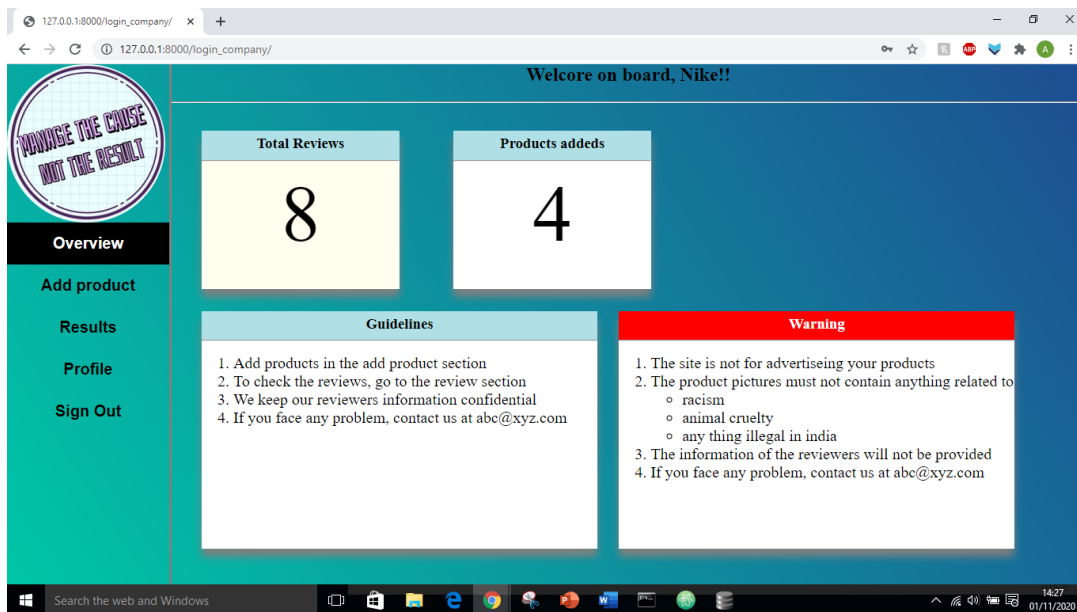
Sign up

<< Return to Login Page
 << Return to homepage

Company dashboard

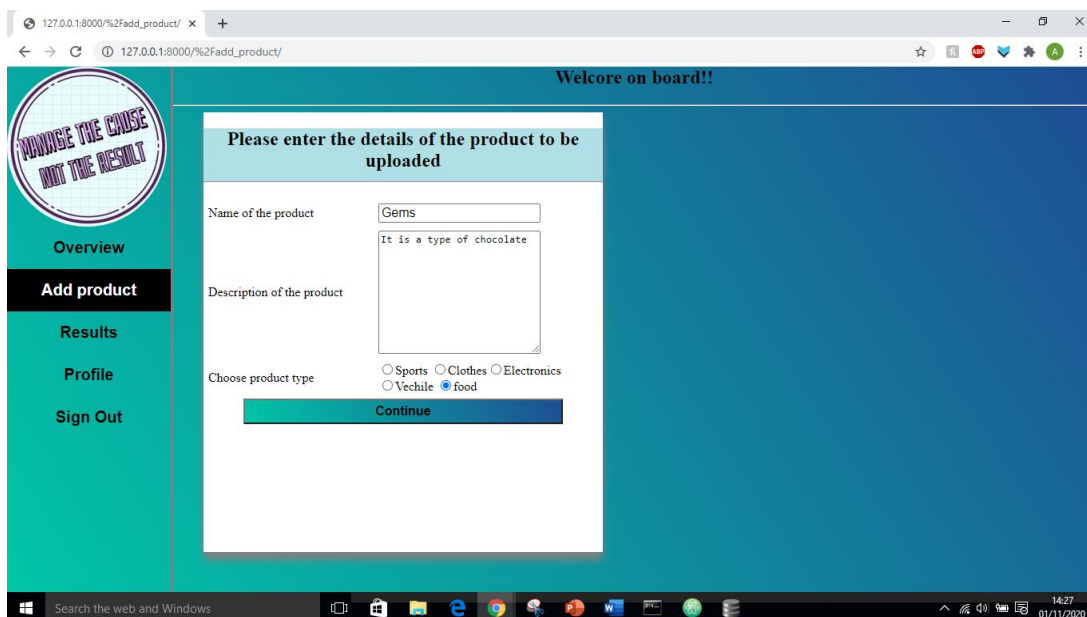
vi. Overview

In this page, the company can view how many reviews it has got for its products and how many products it has added. Similarly, some guidelines for helping the company representative is displayed along with the warnings section where the rules that the company has to follow is mentioned



vii. Add product

This page give company the option to add product. The company has to give name and general description of product and choose type of the product. As per the selected type, the questions in next section will vary.



viii. Question about the product

This page will load question as per the choice of product type in the previous section.

The questions are for product type= food.

The screenshot shows a web browser window with the URL `127.0.0.1:8000/%2Fadd_product/`. The page has a teal sidebar on the left with a circular logo that says "POUNCE THE CHASE NOT THE RESULT". The sidebar contains the following links: Overview, Add product (highlighted), Results, Profile, and Sign Out. The main content area is titled "Please enter the details of the product to be uploaded". It contains eight numbered questions for food products:

1. Choose the type of food?
☐ sweet ☐ sour ☐ spicy ☐ salty
2. Mention the Calorific stats of the food item:
3. Specify the type of preservatives used?
4. Is it based on some type of traditional food?
☐ yes ☐ no
5. Mention the speciality of your product.
6. Is the product vegan?
☐ yes ☐ no
7. Can you list this type of products that you have launched before?
8. Give some additional information about the food item (such as expiry time)?

Below the questions, there is a section for uploading three pictures of the product. Each picture has a "Choose File" button and a "No file chosen" status. At the bottom of the form, there are "Cancel" and "Upload product" buttons. The Windows taskbar at the bottom shows the date as 01/11/2020 and the time as 14:28.

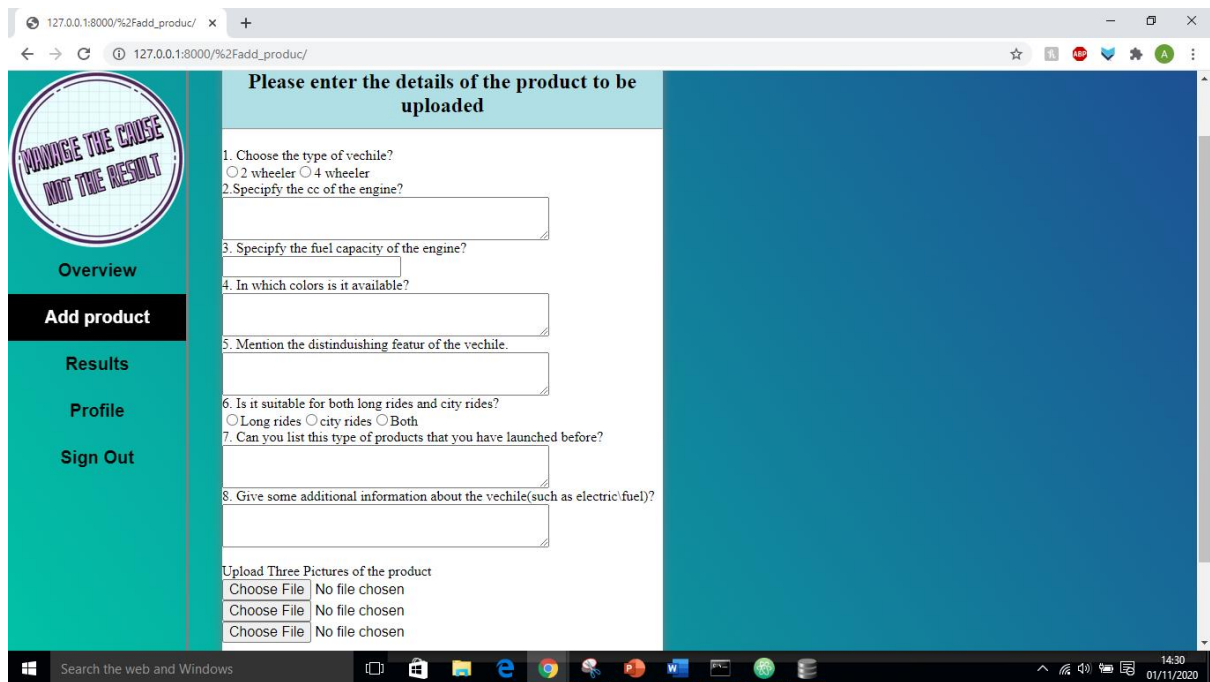
The questions below are for product type= Sports

The screenshot shows the same web browser window, but the questions are now for sports products. The sidebar remains the same. The main content area is titled "Please enter the details of the product to be uploaded". It contains eight numbered questions for sports products:

1. Is it for indoor sports or outdoor sports?
☐ indoor ☐ outdoor
2. Can it be used by both professionals and the public?
☐ yes ☐ no
3. Does it give boost to a athletes ability?
☐ yes ☐ no
4. Can the product be used for child games?
☐ yes ☐ no
5. Mention the most appealing characteristics of your product that can help the sports community to be more better
6. Has any sports personality has suggested you to develop this product? If yes, give his/her name?
7. Can you list this type of products that you have launched before?
8. Give some additional information about the product?

Below the questions, there is a section for uploading three pictures of the product. Each picture has a "Choose File" button and a "No file chosen" status. At the bottom of the form, there are "Cancel" and "Upload product" buttons. The Windows taskbar at the bottom shows the date as 01/11/2020 and the time as 14:29.

The questions below are for product type Vehicle



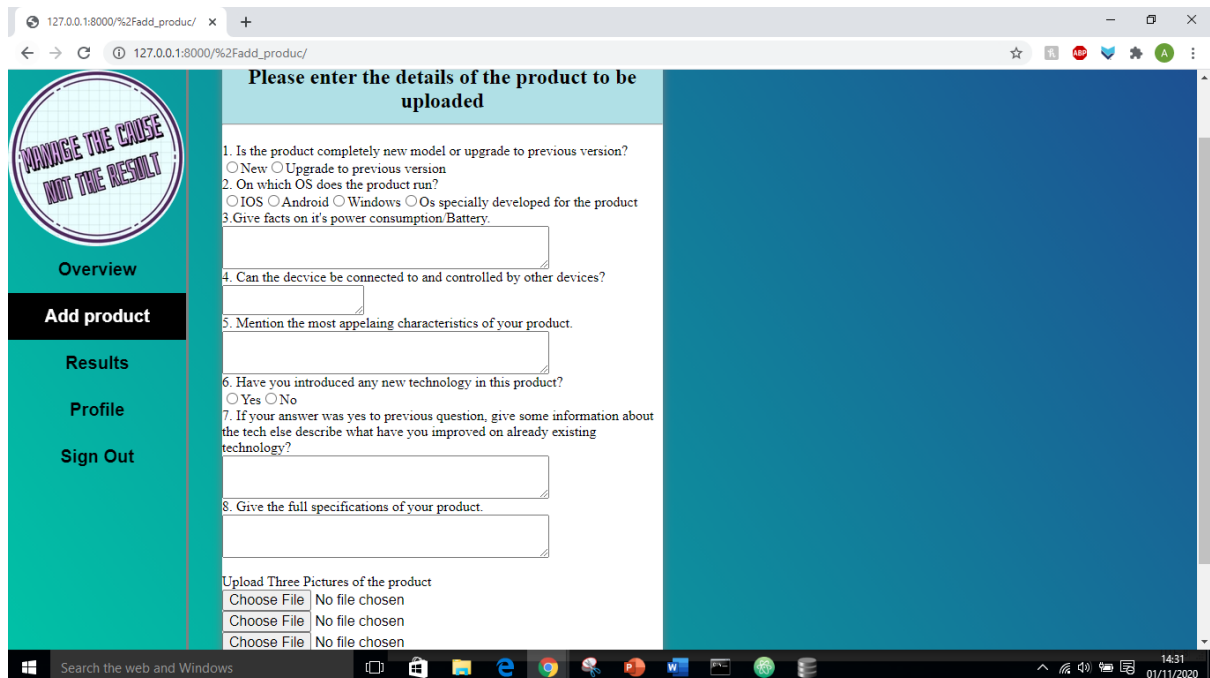
PLEASE ENTER THE DETAILS OF THE PRODUCT TO BE UPLOADED

1. Choose the type of vehicle?
☐ 2 wheeler ☐ 4 wheeler
2. Specify the cc of the engine?
3. Specify the fuel capacity of the engine?
4. In which colors is it available?
5. Mention the distinguishing feature of the vehicle.
6. Is it suitable for both long rides and city rides?
☐ Long rides ☐ city rides ☐ Both
7. Can you list this type of products that you have launched before?
8. Give some additional information about the vehicle (such as electric/fuel)?

Upload Three Pictures of the product

Choose File	No file chosen
Choose File	No file chosen
Choose File	No file chosen

The questions below are for product type= Electronics(tech)



PLEASE ENTER THE DETAILS OF THE PRODUCT TO BE UPLOADED

1. Is the product completely new model or upgrade to previous version?
☐ New ☐ Upgrade to previous version
2. On which OS does the product run?
☐ IOS ☐ Android ☐ Windows ☐ OS specially developed for the product
3. Give facts on its power consumption/Battery.
4. Can the device be connected to and controlled by other devices?
5. Mention the most appealing characteristics of your product.
6. Have you introduced any new technology in this product?
☐ Yes ☐ No
7. If your answer was yes to previous question, give some information about the tech else describe what have you improved on already existing technology?
8. Give the full specifications of your product.

Upload Three Pictures of the product

Choose File	No file chosen
Choose File	No file chosen
Choose File	No file chosen

The questions below are for product type= Clothes

Please enter the details of the product to be uploaded

1. Choose the gender your product is for
☐ male ☐ female ☐ Both
2. Choose the age group it is for:
☐ Children ☐ Youth ☐ Old
3. Choose the material it is made from?
☐ cotton ☐ silk ☐ wool ☐ polyester
4. In what sizes are the product available?
5. Mention the most appealing characteristics of your product.
6. What was the inspiration for this product? Were you inspired by some celebrity?
7. Can you list this type of products that you have launched before?
8. Give some additional information about the product?

Upload Three Pictures of the product

Choose File No file chosen

Choose File No file chosen

Choose File No file chosen

ix. Product upload acknowledgement

On successful upload of product, this page is displayed

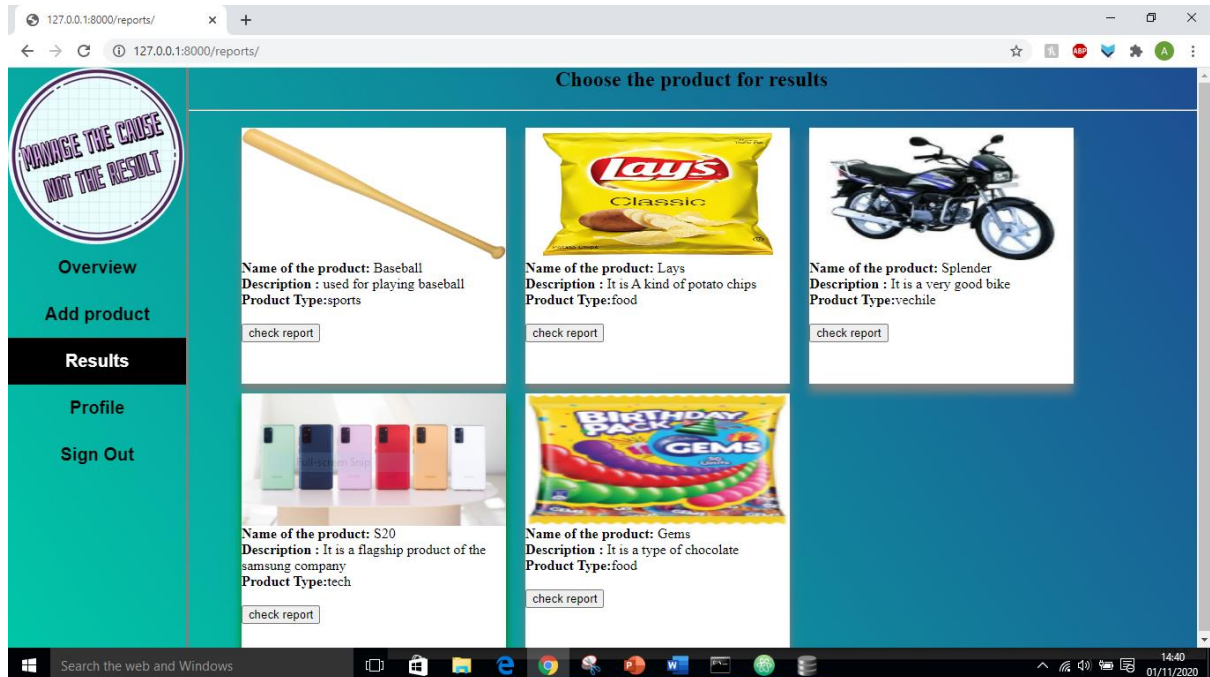
Product added

The Product has been added successfully

Add other products Head back to Overview

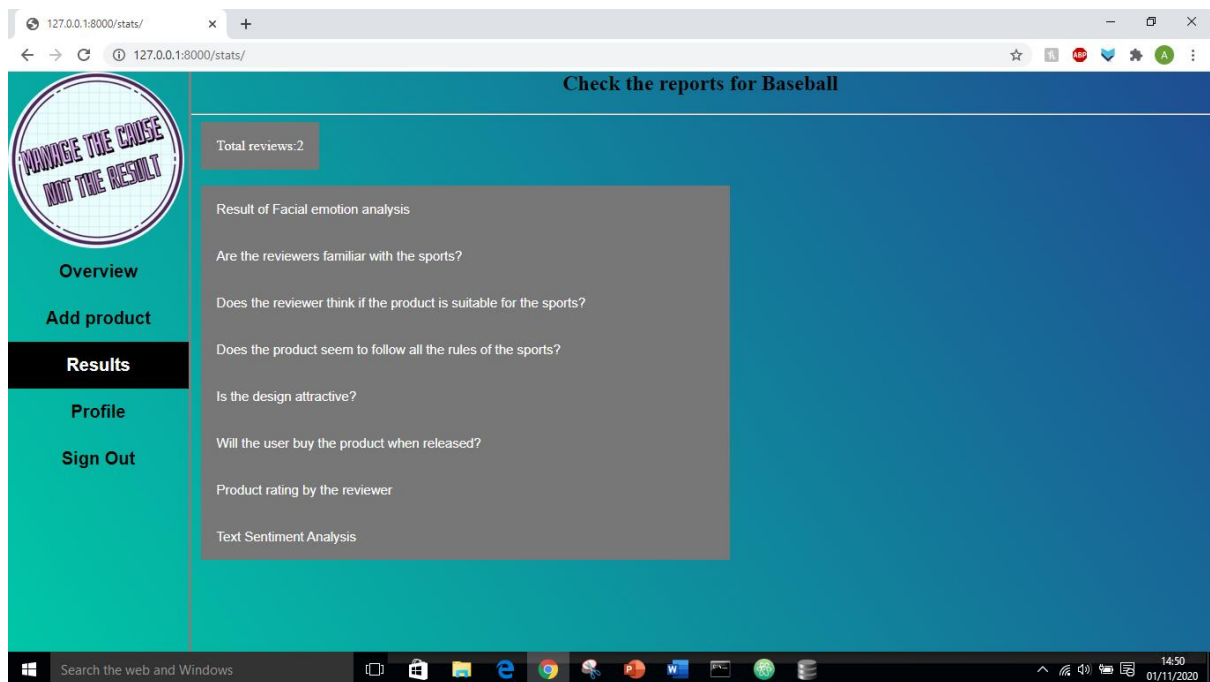
x. Product selection for result view

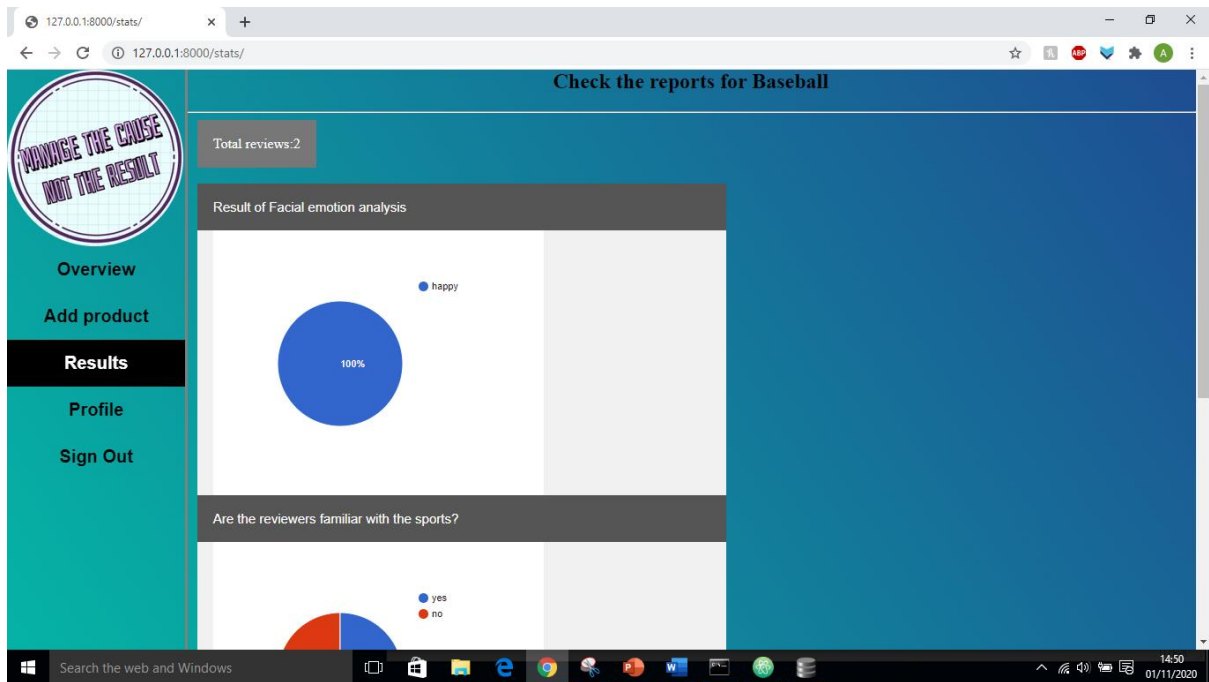
This page displays all the products uploaded by the company. They can click on check report to check the review results. On hovering over any of the product displayed below, the border of product display is highlighted in green.



Xi . Results

As per the selected products, the result question along with graph is loaded. When you click on the question respective graph will be visible as shown in the second picture. The questions loaded are dependent on the product type.





xii. Profile

This is the profile page for the company where they can change their password or view their basic details

127.0.0.1:8000/company_profile/

Nike's Profile

Profile

Name: Nike

Product count: 5

Reviews count: 8

Subscription: Basic

Password

Current Password:

New Password:

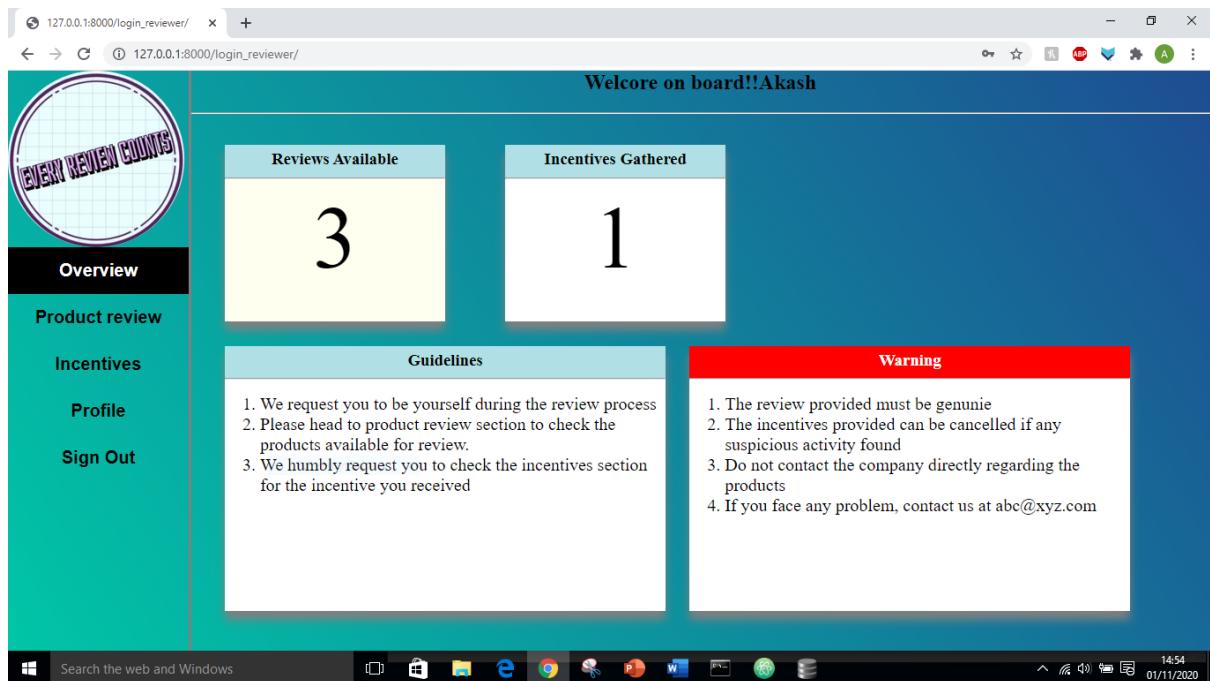
Re-enter New Password:

Change Password

Reviewer Section

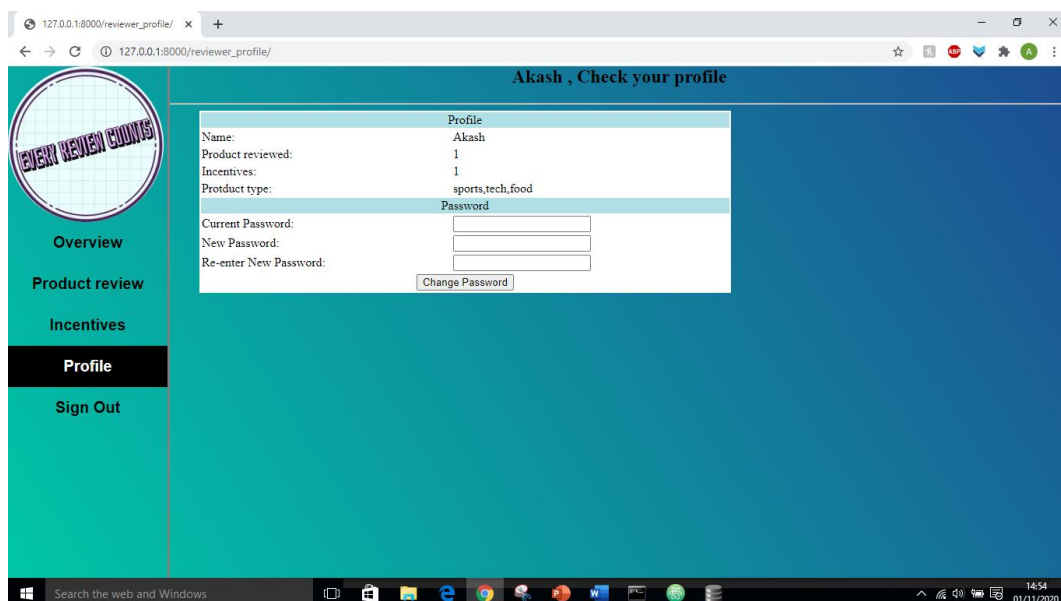
xiii. Overview

In this page, the reviewer can view how many reviews he/she can give and how many incentives he can . Similarly, some guidelines for helping the reviewers is displayed along with the warnings section where the rules that the reviewer has to follow is mentioned



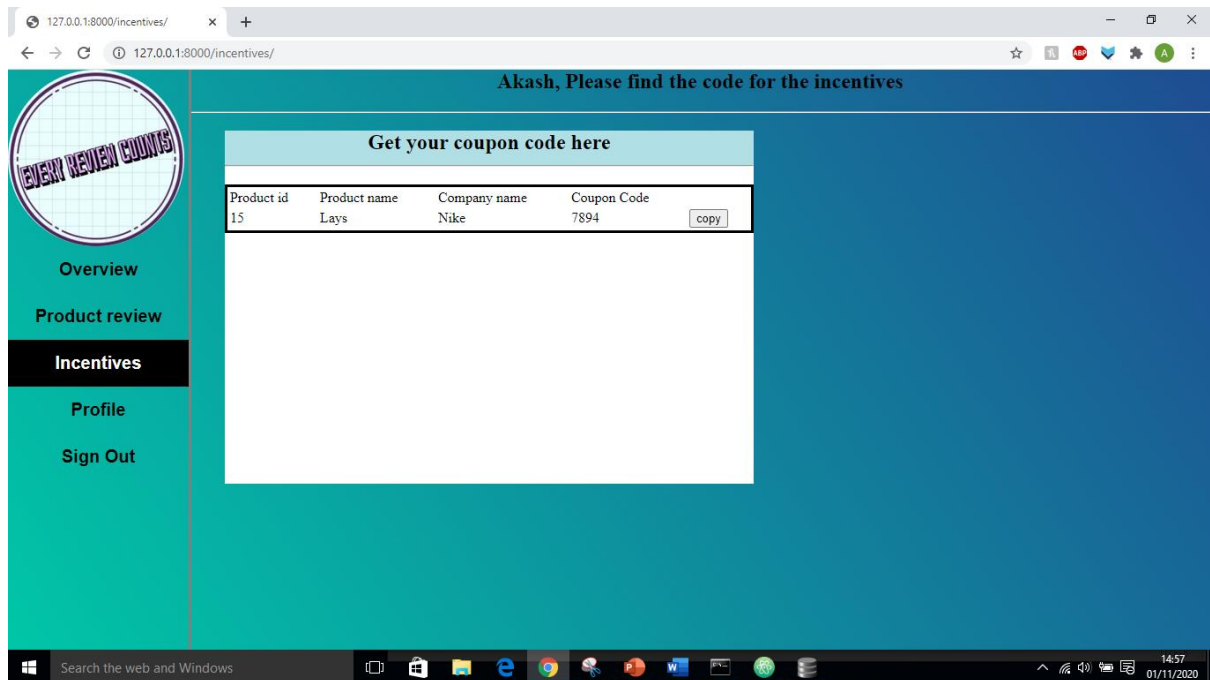
xiv. Profile section

Here the reviewer can check his basic details and also change his password



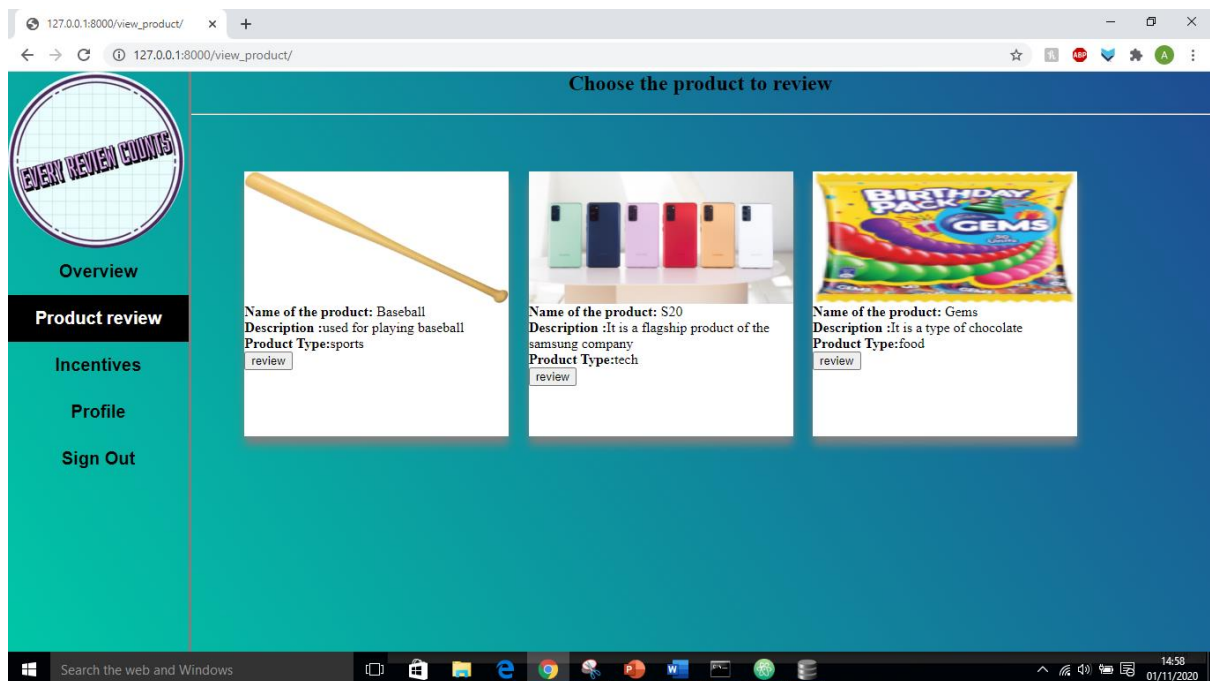
xv. Incentive

The reviewer can collect his/her incentives coupon code in this page.

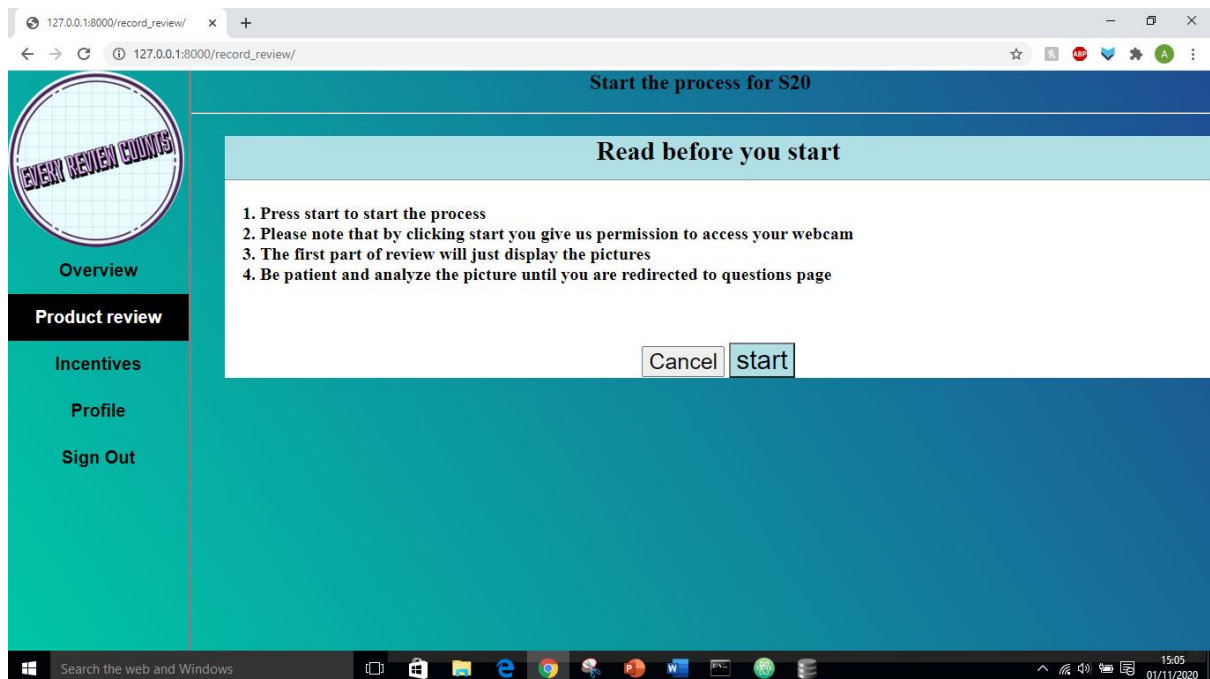


Xvi. Product review

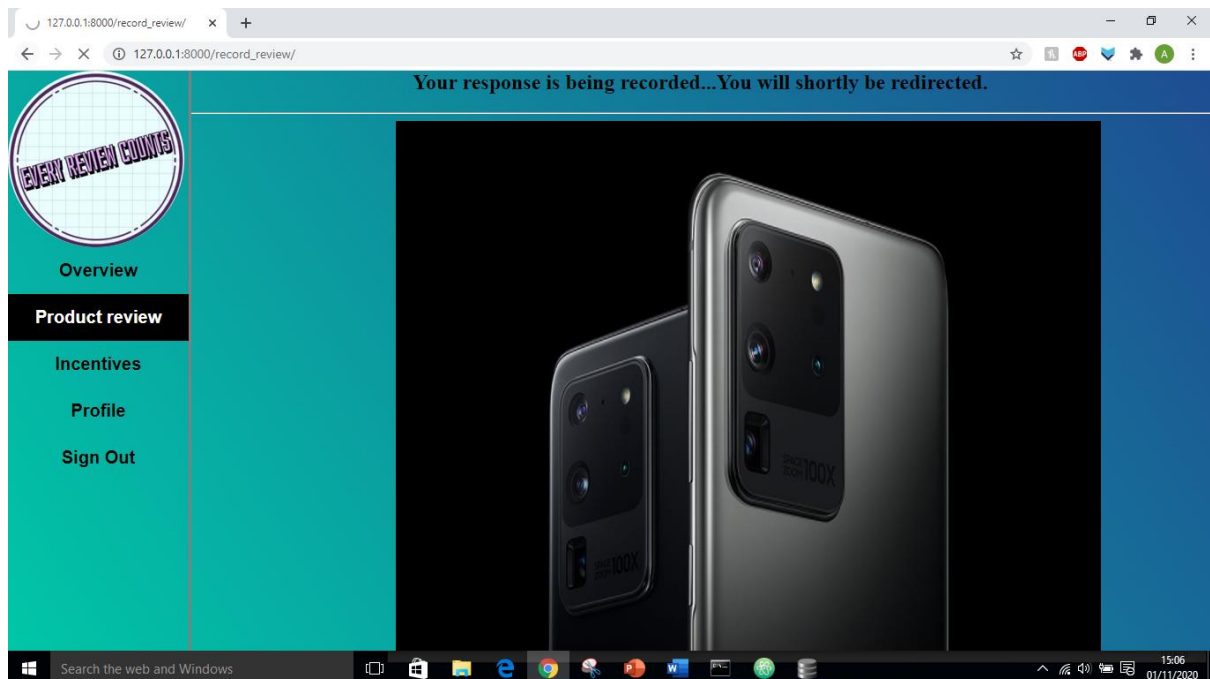
In this page, all the products that the reviewer can give review of is shown. On hovering over it, the background is highlighted with green color. The reviewer can click on review to start the review process



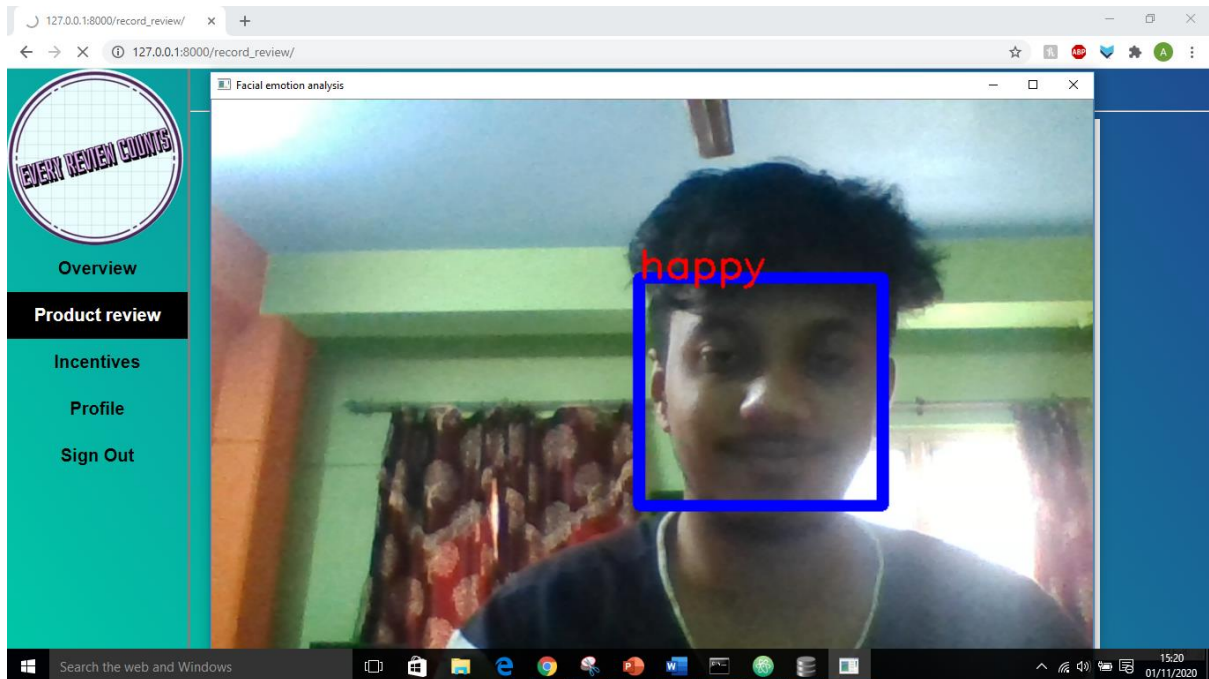
This is the first step for the review process after selecting a product. It gives general instruction for the review process. If the reviewer wants he can cancel the process.



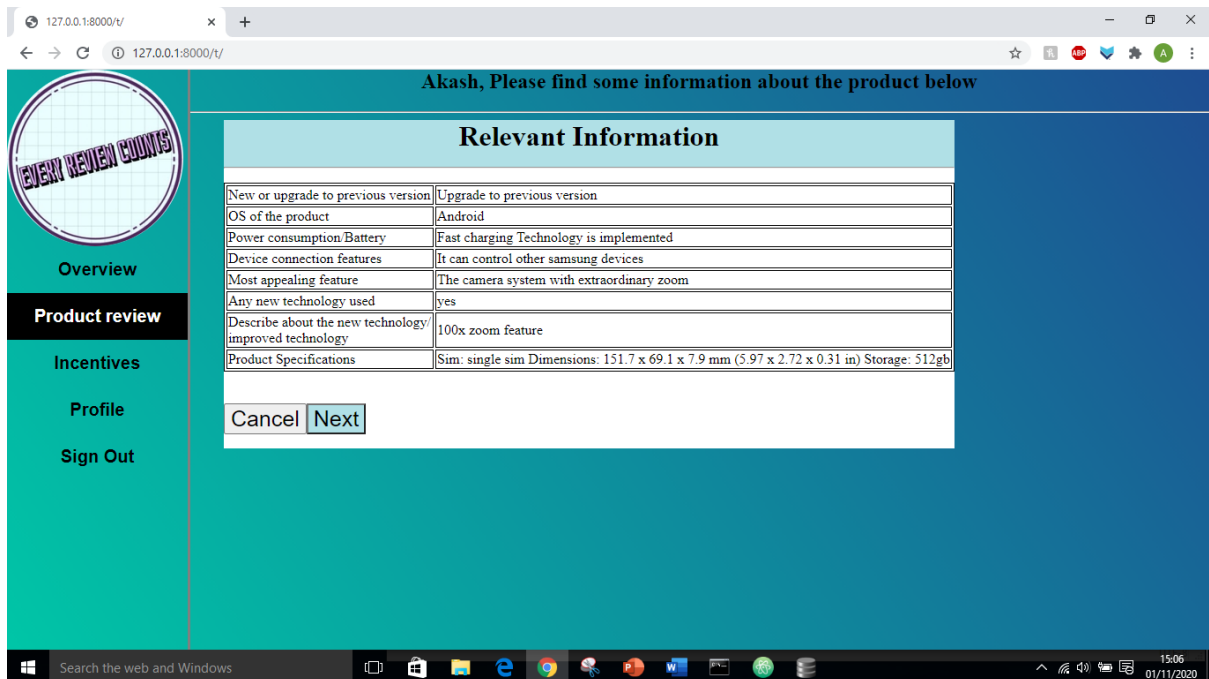
This is the second phase of the review process. Here, a slide show of the pictures of product is shown and the emotion of the reviewer is recorded in the background.



The demo for emotion record. The following window is not displayed in the actual process. It is just shown here for demonstration process.



After the slideshow, the reviewer is redirected to a page where the informations of the product being reviewed is displayed.



On clicking next the questionnaire is presented to the reviewer as shown in the figure below. The questionnaire is different for different product types. The below is for the product type electronics(tech).

127.0.0.1:8000/read_description/ x +

← → 127.0.0.1:8000/read_description/ ☆

Overview

Product review

Incentives

Profile

Sign Out

Akash, Please complete the form below to finish the review

Thanks for your patience.

Now please answer the following questions

1. Have you used this type of electronic device before?
☐ yes ☐ no
2. Do you think the device will be useful in you daily life
☐ yes ☐ no
3. What do you think is the most appealing?
☐ Design ☐ features ☐ both
4. Have you used any product from this company's ecosystem?
☐ yes ☐ no
5. Rate the looks of the device. ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
6. Estimate the price of the device
7. If you were to buy this product, would you like us to launch different models such as basic and advanced?
☐ yes ☐ no
8. Compare the product with the current available technologies.
9. Mention the most appealing feature of the device in your view.
10. Give a overall rating for the product.
☐ Excellent ☐ Good ☐ Satisfactory ☐ Poor ☐ Very Poor

Search the web and Windows 15:07 01/11/2020

The picture below shows the questionnaire for product type food. Similarly, there are other questionnaires for the other product types.

127.0.0.1:8000/read_description/ x +

← → 127.0.0.1:8000/read_description/ ☆

Overview

Product review

Incentives

Profile

Sign Out

Akash, Please complete the form below to finish the review

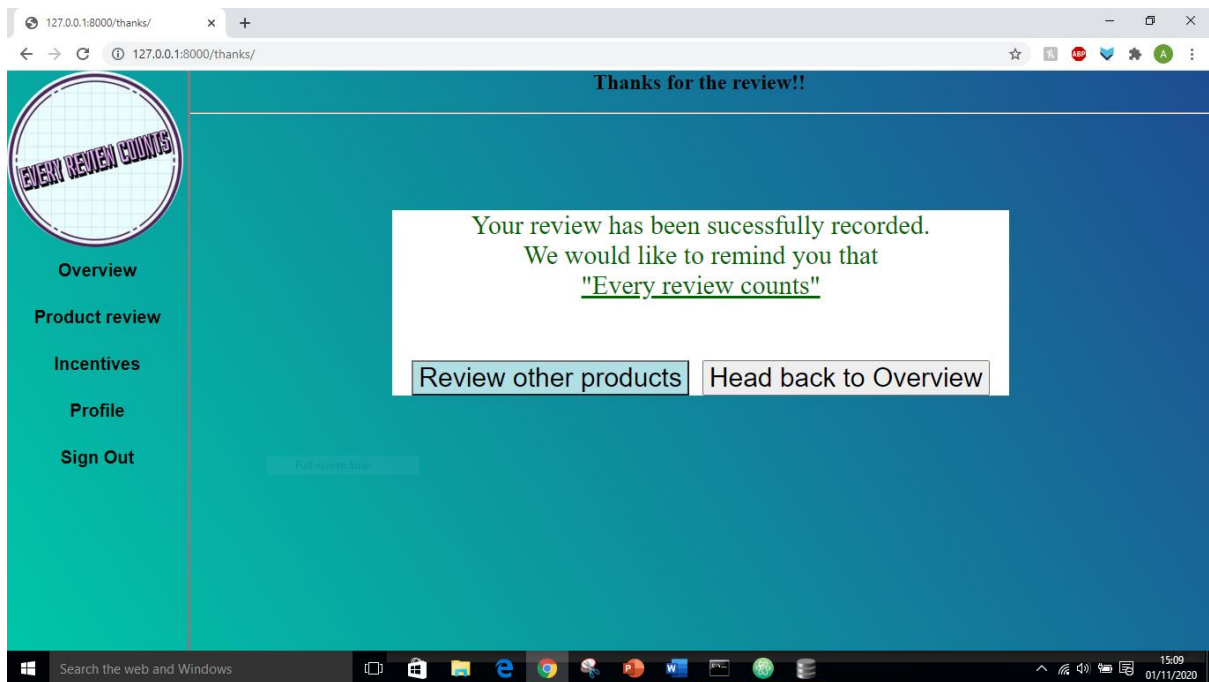
Thanks for your patience.

Now please answer the following questions

1. Do you think the food item displayed will fit in your diet plan?
☐ yes ☐ no
2. In your view has the food item been properly represented by package designing?
☐ yes ☐ no
3. Have you eaten this type of packaged food before?
☐ yes ☐ no
4. Give your views on the calorific value of the food?
5. Will you use the product when it will be available in the market?
☐ yes ☐ no ☐ maybe
6. What do you expect the price of the product will be?
7. Give your views about the design of the product?
8. Do you find the product offensive in any way (like discrimination)?
☐ yes ☐ no ☐ maybe
9. Mention what you didn't like about the product?
10. Give a overall rating for the product.
☐ Excellent ☐ Good ☐ Satisfactory ☐ Poor ☐ Very Poor

Search the web and Windows 15:26 01/11/2020

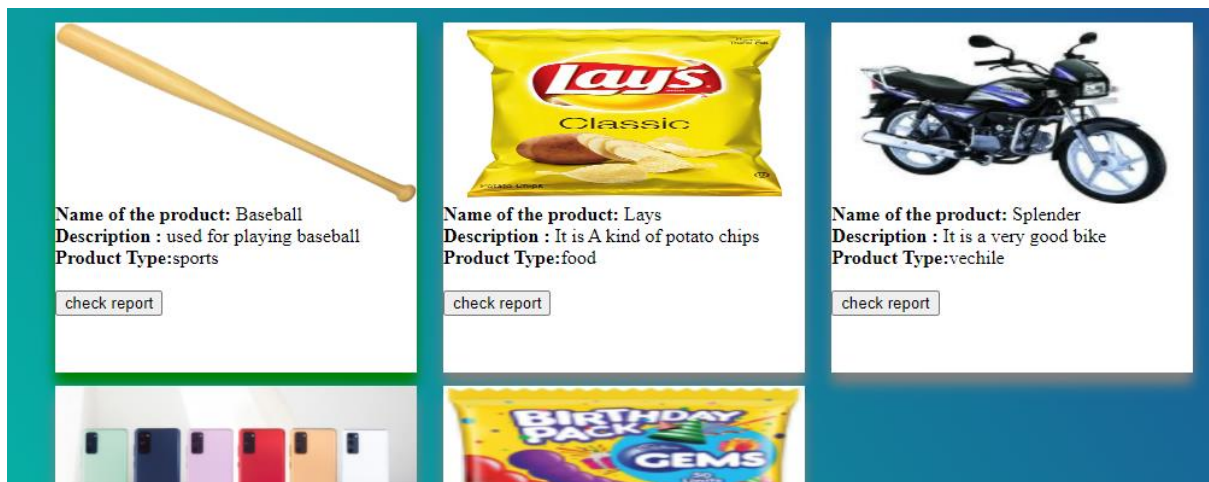
The following page is shown on successful completion of the review process.



10. Interfaces validation with Nielsen's heuristics

a. Visibility of system status

- i. A message of successful product upload is shown as in figure no. ix
- ii. A message of successful review completion is shown as in last figure of previous section
- iii. When you hover over the products displayed in the results section of the company dashboard or in the review products in the reviewer dashboard, the product is highlighted. In the picture below you can see the item baseball is highlighted in green.



- iv. Talking about the side menu in both company and reviewer dashboard, the section which you are in is highlighted in black.



Here , you are in results section. If you hover over any other option , they will also be highlighted for the time you hover over it.

b. Match between the system and the user

No any confusing words for actions are used. For example, Add product signifies the act of adding product, result signifies the process of checking reports, review signifies the task of giving review, etc

c. User control and freedom.

- i. If the user wants to login but mistakenly chooses the option of sign up, then there is a login option available in sign up page and vice versa
- ii. During the review process, the reviewer is given option to cancel the review process during any step of the process. Cancel button is given in every step.(figures in Xvi of the above section)
- iii. Similarly, the users are given options to change their password in profile section
- iv. The company can also abort the product adding process if they wish to. A cancel button is also given for them (check vii of above section)
- v. Similarly, the reviewers can choose the products they want to give the review of or the company can upload the products they want. Reviewers have freedom to choose the product that they want to give review of.

d. Consistency and standards.

- i. The position of the side menu for both the reviewer dashboard and company dashboard is fixed irrespective of the action they perform. Similarly, the terminologies used in the menu also never changes.
- ii. The color used for the background is same throughout the website.


e. Error Prevention

The signup form validates the information while the user types. The user doesn't need to submit the form to find out his errors. Similarly if any of the section in the form is left blank the sign up form cannot be submitted. You can see the demonstration in picture below

Sign Up

Name
Name

Email Id
aadsfsaf

 Please fill out this field.

your email is invalid

Phone number
9003497657

your number is valid

Choose any 3 Product type:

☐ Sports ☒ Clothes ☒ Tech ☐ Vechile
☐ food ☒ websites

password
...

*length must be greater than 8
*must contain a digit

Re-enter password
..

Password doesn't match

Sign up

[<< Return to Login Page](#)
[<< Return to homepage](#)

f. Recognition rather than recall.

i. We have used frequently used terms in our daily life through out the website. We have strictly restricted us from the use of jargoon words.

ii. Similarly, during the sign up form fill ups we have given pattern of the information expected such as email pattern, phone number pattern.

iii. In the homepage, we have placed the sign up and login button on the top right. Generally, it is placed there for many websites.

g. Flexibility and efficiency of use.

During the review process of a reviewer, certain instruction is displayed to be followed by the user. The new user can read it. For the reviewer who is used to this process they can skip the instructions and start the process.

h. Aesthetic and Minimalist design

No any unnecessary information is displayed in any of the web pages. From the homepage to the dashboards, only necessary options are kept. No any longer text is displayed anywhere in the website.

i. Help users recognize, diagnose and recover from errors.

- i. If the user mistakenly chooses login option instead of signup option, then we have link in the login page to redirect to signup page and vice versa.
- ii. If the user enters wrong username or password, invalid username or password message is displayed.
- iii. If the user mistakenly starts the review process for a different product than wished, then he can abort the process in the middle.

j. Help and Documentation

- i. The general procedure/help information is shown under the guideline section in the overview page of both the dashboards.
- ii. Before the review process starts, a general documentation about the whole process is shown.

11. Comparative analysis with other technologies discussed above

In the method by Purnima Mokadam[b], they use memory based LSTM for text sentiment analysis while we use textblob library of the python. They purposed to do emotion analysis during the product launch event while we are purposing the analysis to be done before the product launch so that changes can be made to the product before launching.

In case of pepper the robot, the robot shows the products as per the mood of the customer and changes the product if the mood degrades. In contrast to it our platform is not for the display and sales of product, our platform is to give an brief analysis on the product about how the potential customer feels about their product.

There is a great similarity in the real eyes[8] platform and our platform. Both the platform focus on improving the products. The only difference is that they provide analysis on the ad videos and other videos related to product while we provide analysis on the product.

12. Conclusion and Future Scope

We can conclude that we have built a efficient system for analysis of a product with the help of facial emotion and text sentiment analysis. Our platform provides complete package for the improvement of the product on the basis of potential customer reviews.

Our system can be made more effective by increasing the accuracy of the cnn model used for the emotion detection. The use of the platform can be extended In the future. Other then the product review, we can extend the system in online websites where we can detect customer satisfaction in the buying process through the help of emoton analysis.

13. References:

- a. “Product Review Based on Optimized Facial Expression Detection”
Vikrant Chaugule, Abhishek D, Aadheeshwar Vijayakumar, Pravin Bhaskar Ramteke, and Shashidhar G. Koolagudi
- b. “Customer Reaction Analysis using Convulational Neural Network”
Purnima Mokadam, Tanay Kulkarni, Nikahat Mulla
- c. “Predicting ad liking and purchase intent: Large Scale Analysis of Facial responses to Ads”
Daniel McDuff, Rana El kaliouby, Jeffry F. cohn, Rosalind W. Picard
- d. “Real time emotion recognition using from facial expressions using CNN architecture” Mehet Akif, Berkay Elagoz, Aydin Akan
- e. “An efficient real time product recommendation using Facial sentiment Analysis”
R. Suguna, M. Shyamala Devi, Akash Kushwaha, Puja Gupta
- f. “Product appreciation by using facial expression analysis”
M Popa, L Rothkrantz, P Wiggers
- g. Pepper the robot
(<https://www.softbankrobotics.com/emea/en/industries/retail>)
- h. Real eyes (realeyesit.com)

14. Appendix

a. Link to ppt

<https://drive.google.com/file/d/11xLWTuc0BiXcfozg9EsM8EwpsNJXBbN6/view?usp=sharing>

b. Link to video demonstration

<https://drive.google.com/file/d/1W8iYbYfW5E1LKmtRqmYzJ9W28qRMFnu9/view?usp=sharing>

c. link to access source files

<https://drive.google.com/drive/folders/1zIYwJGGxrH5vrqGhJxyxh9q6LTsMmzqs?usp=sharing>

d. Link to file for steps of execution

<https://drive.google.com/file/d/1gmIj80u6bMAzZvX7TnKuO6CVq3AUYf0Y/view?usp=sharing>