



**SMART INDIA  
HACKATHON  
2020**

**PRESENTED BY :-**

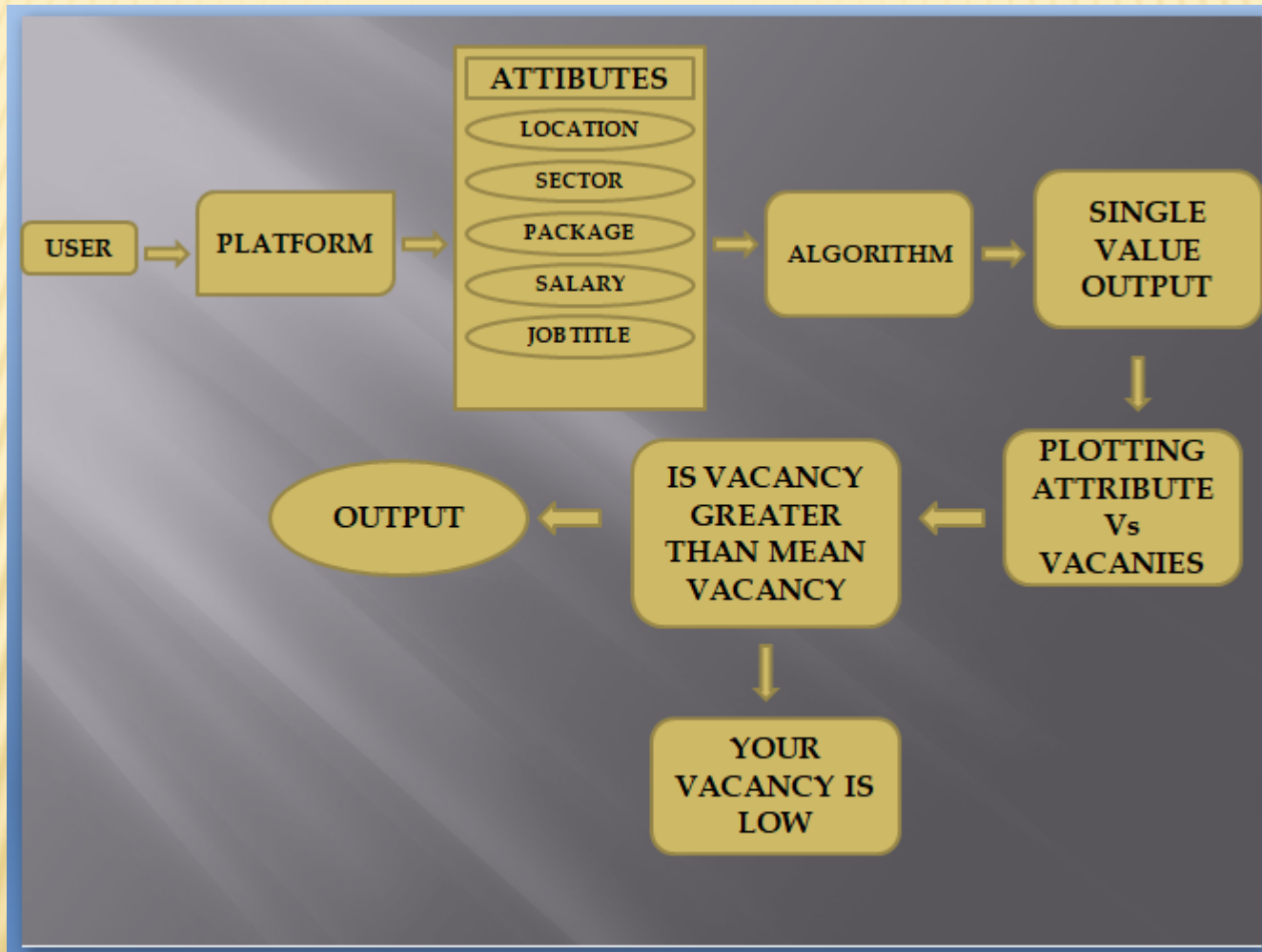
**TEAM TAKSHASHELA#111**

**BHARATI VIDYAPEETH'S COLLEGE OF ENGINEERING, LVALE**

# **PROBLEM STATEMENT**

**The objective of our team is to develop a software solution to predict the future jobs based on location, sector, package and eligibility. Big data analysis can be useful to collect and analyze the data from different job sites and predict the future requirement applying machine learning.**

# ARCHITECTURAL DIAGRAM



# BACKEND DEVELOPMENT

1. While working on the algorithms we found that the string has to convert into numeric values as ML accept better accuracy to it. So, we convert it into labels by using Label Encoding.
2. Since one attribute name Eligibility has having an issue with it so we can't use Label Encoding, as each data in that particular cell has to separate it, so we use Count Vectorizer technique, which segregates each cell. After that it we got better results while working with the algorithms.
3. We have worked on different algorithms and find out the accuracy scores and RMSE values, the table will show the outcomes: -

| Sr. No | ALGORITHM USED | ACCURACY SCORE | RMSE VALUES |
|--------|----------------|----------------|-------------|
| 1      | XGBOOST        | 43.18          | 13.83       |
| 2      | KNN            | 34.20          | 14.87       |
| 3      | RANDOM FOREST  | 43.11          | 13.80       |
| 4      | NAVIES BAYES   | 6.00           | 29.96       |
| 5      | DECISION TREE  | 13.30          | 18.47       |
| 6      | LINEAR         | 37.30          | 18.00       |
| 7      | LOGISTIC       | 42.5           | 19.33       |
| 8      | SVM            | 7.60           | 19.03       |



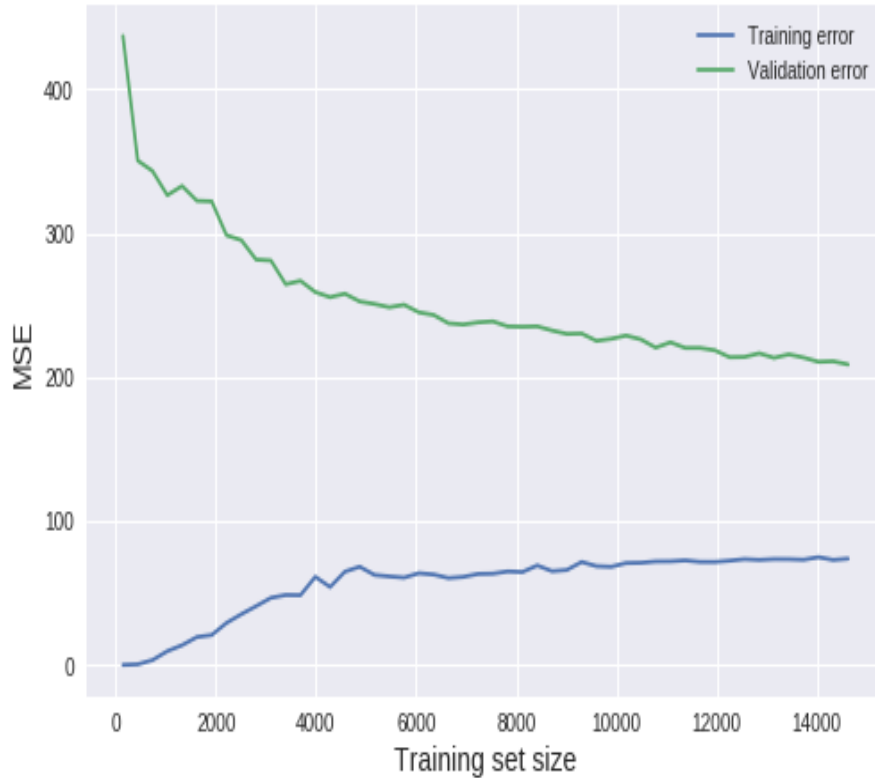
**4. For more classification we go to insights and checked the learning curves with gives us better knowledge about with algorithm to apply in our project.**

**5. We also plotted the graphs of the current data after training the model which other attributes which will help for the user to know for better approach.**

**6. Currently, we are working on the prediction graph which will give better idea for the future jobs in respect with vacancy and as well as we are working on the connectivity through flask what we have done till now.**

# LEARNING CURVES OF ALGORITHM

Learning curves for a Xgboost Regression model



**XGBoost**

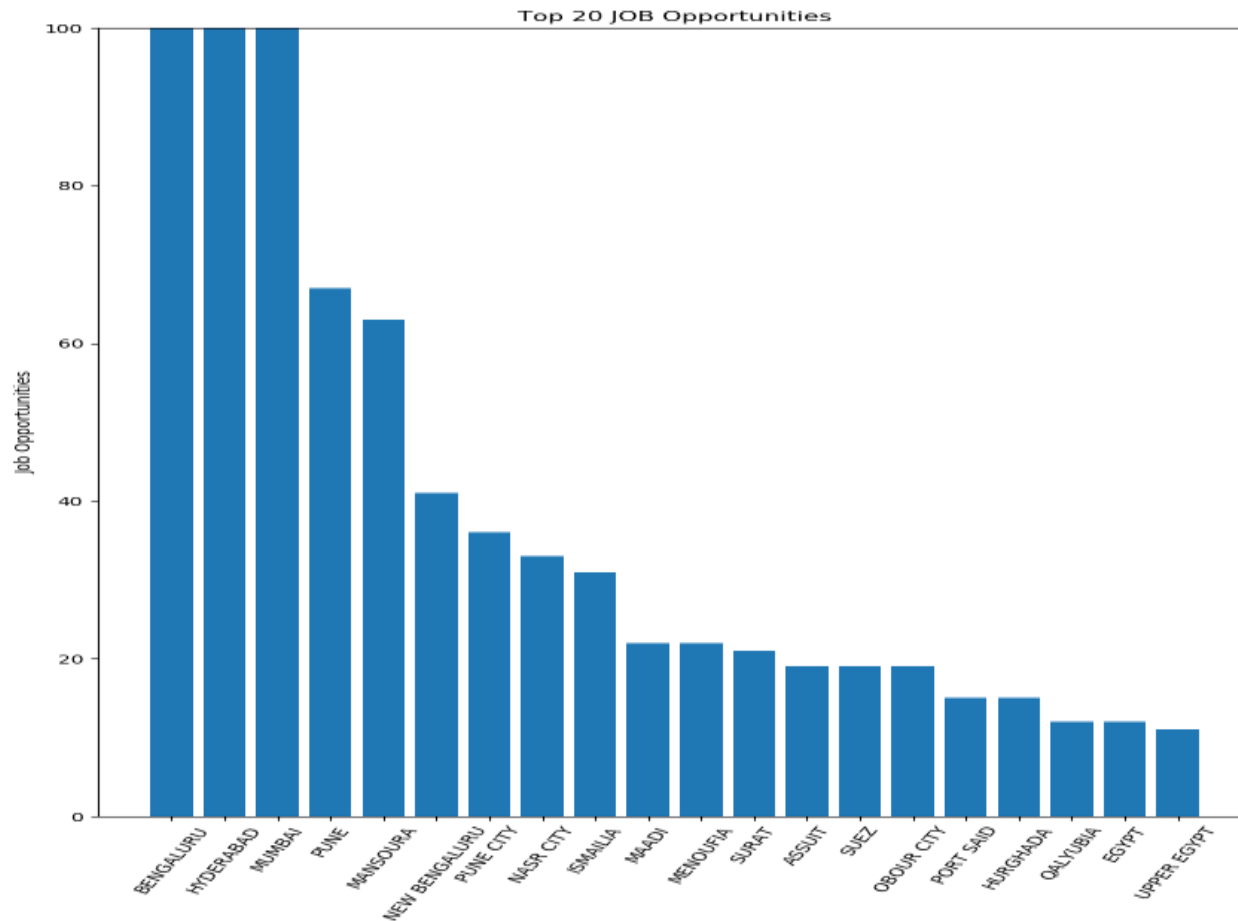
Learning curves for a Random Forest Regression model



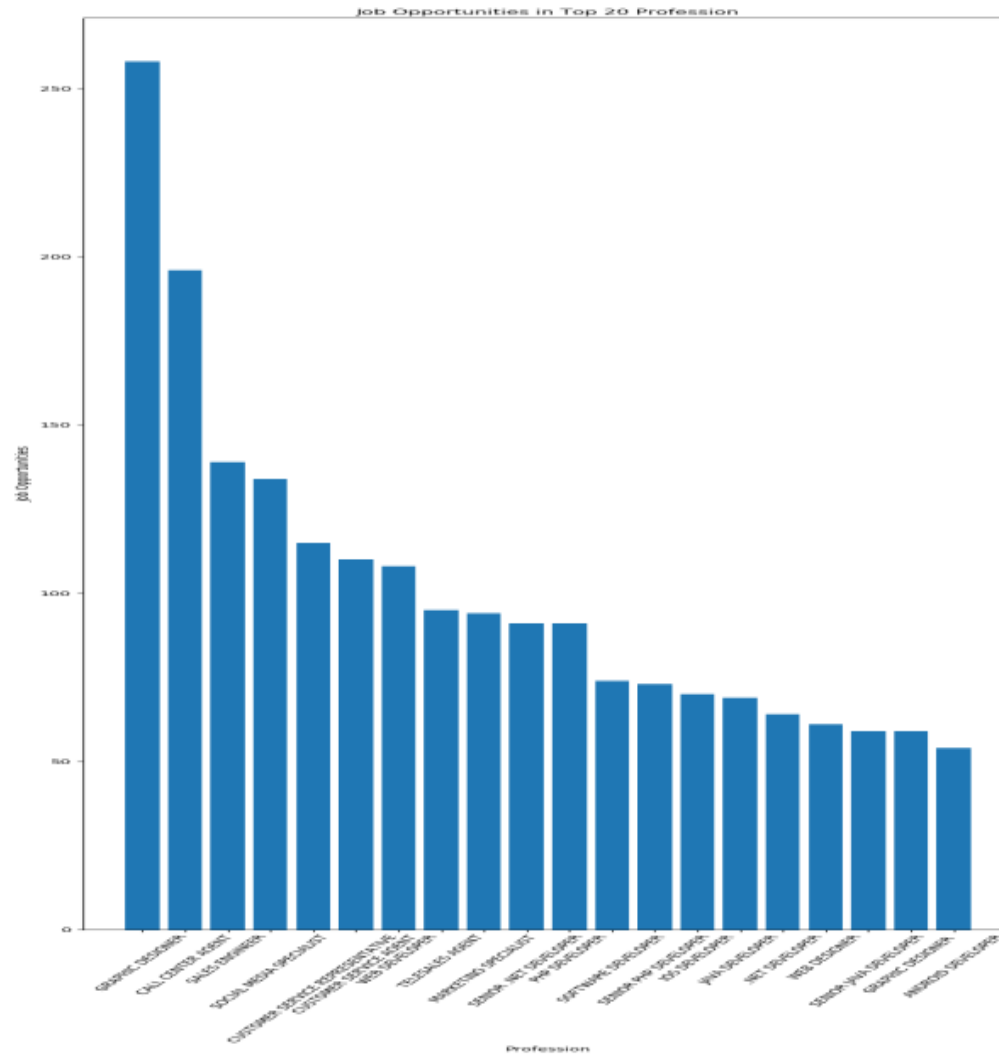
**RANDOM FOREST**

# CURRENT DATA PLOTTING AGAINST VARIOUS ATTRIBUTES AFTER TRAINING THE MODEL

## LOCATION-VACANCY

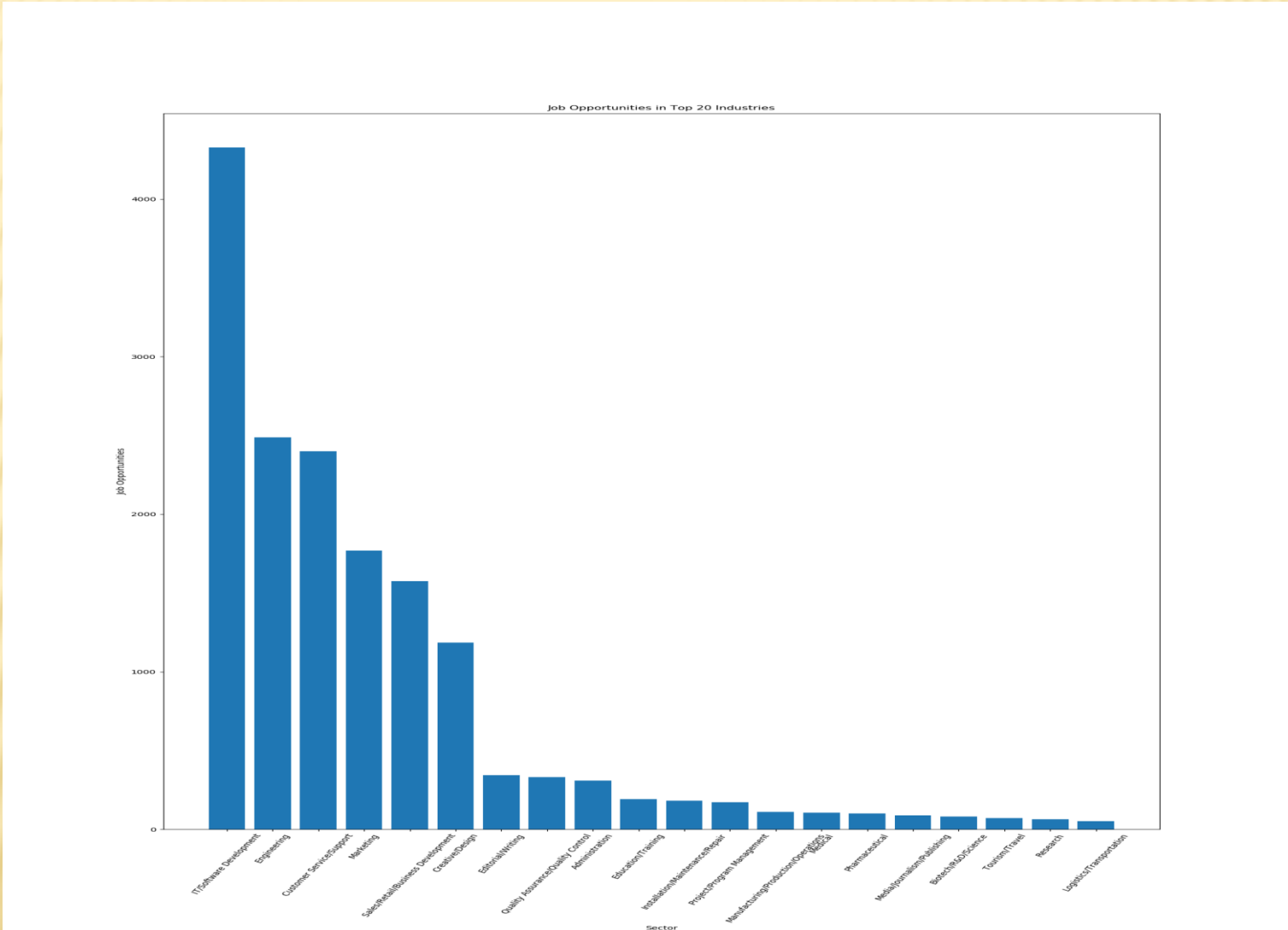


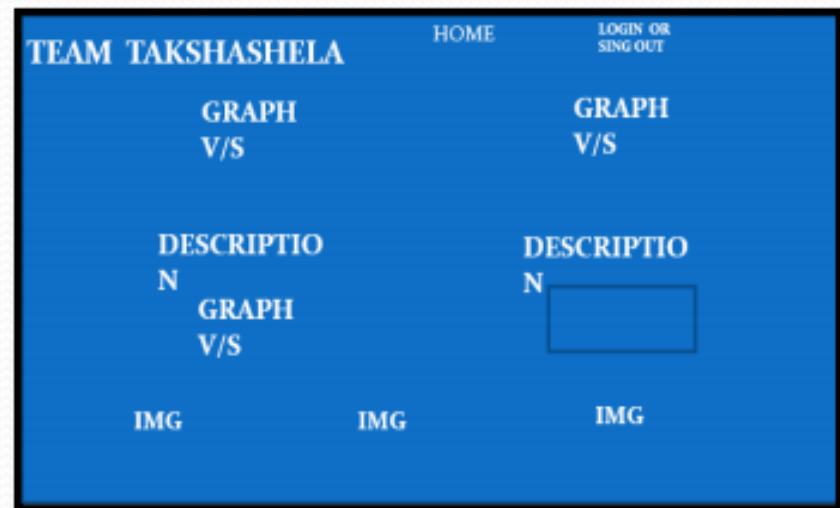
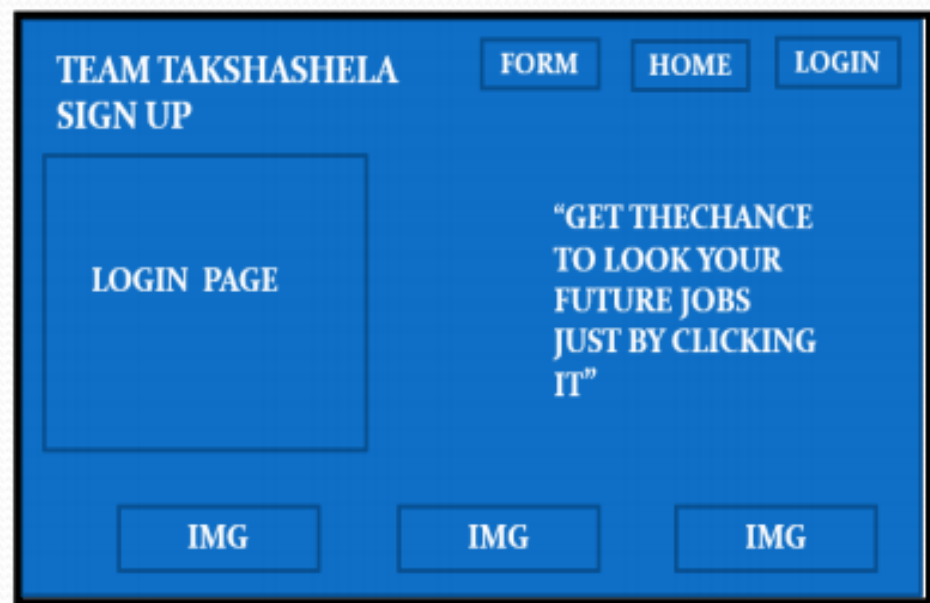
# PROFESSION-VACANCY





# SECTOR-VACANCY





# FRONTEND WITH FLASK

**We have connected our index, signup, login and other html pages with flask framework.**

**In signup page all the credentials will save in MySQL database.  
We have use SQLAlchemy for connectivity with databases.**

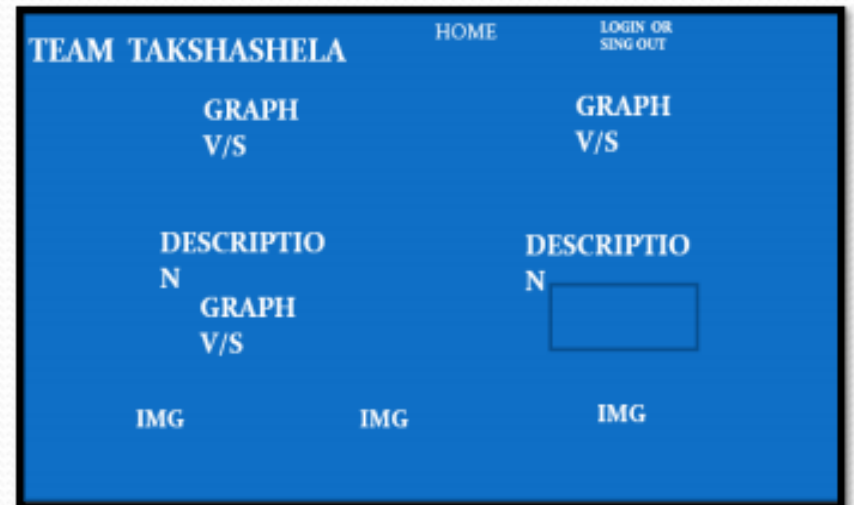
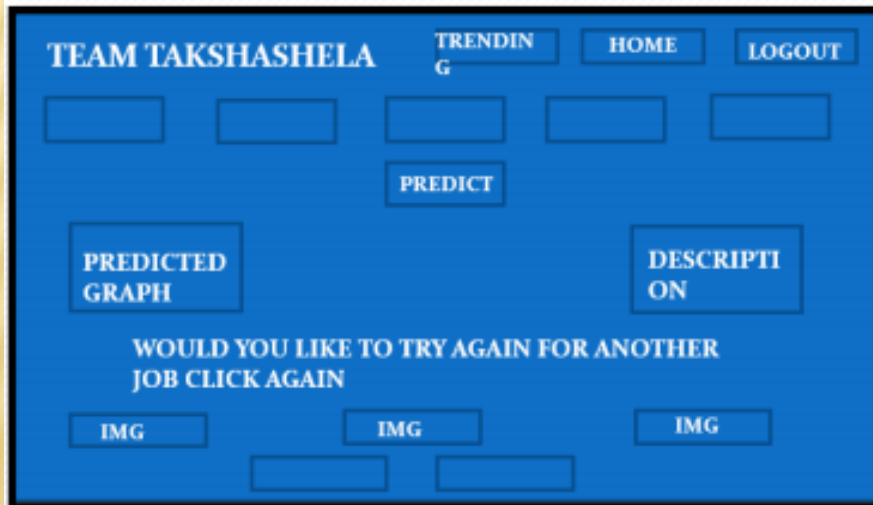
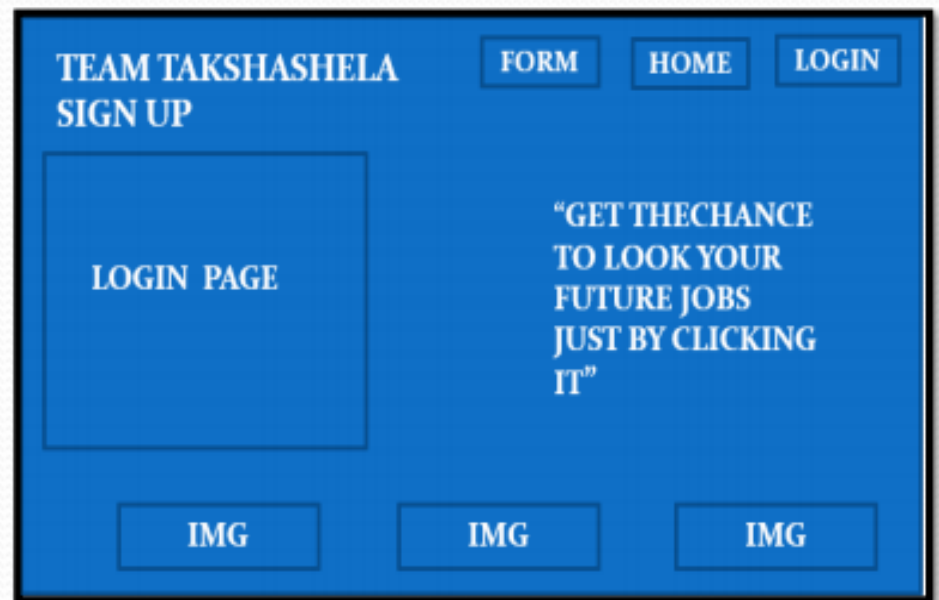
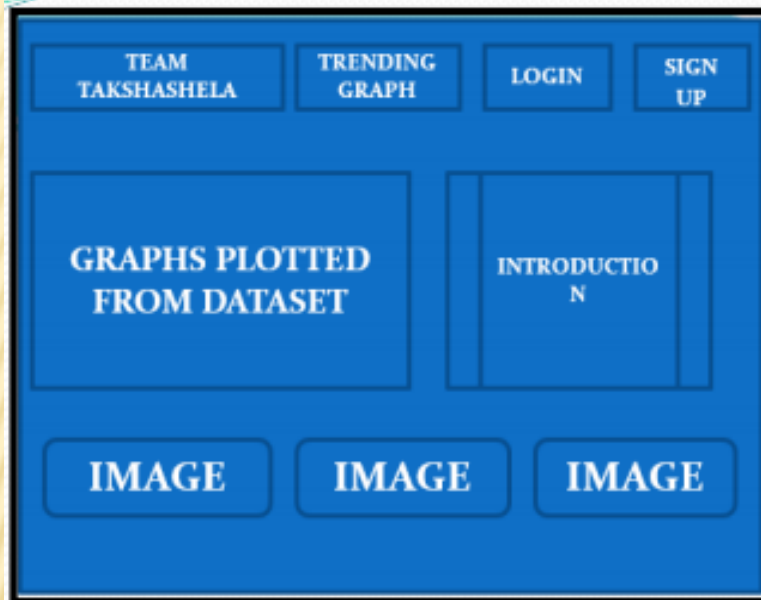
**In login page credentials we fulfil all the criteria which will redirect to the main page and if not, message will be flashed with wrong credentials.**

**The credentials will be extracted from MySQL database to check if it is correct.**

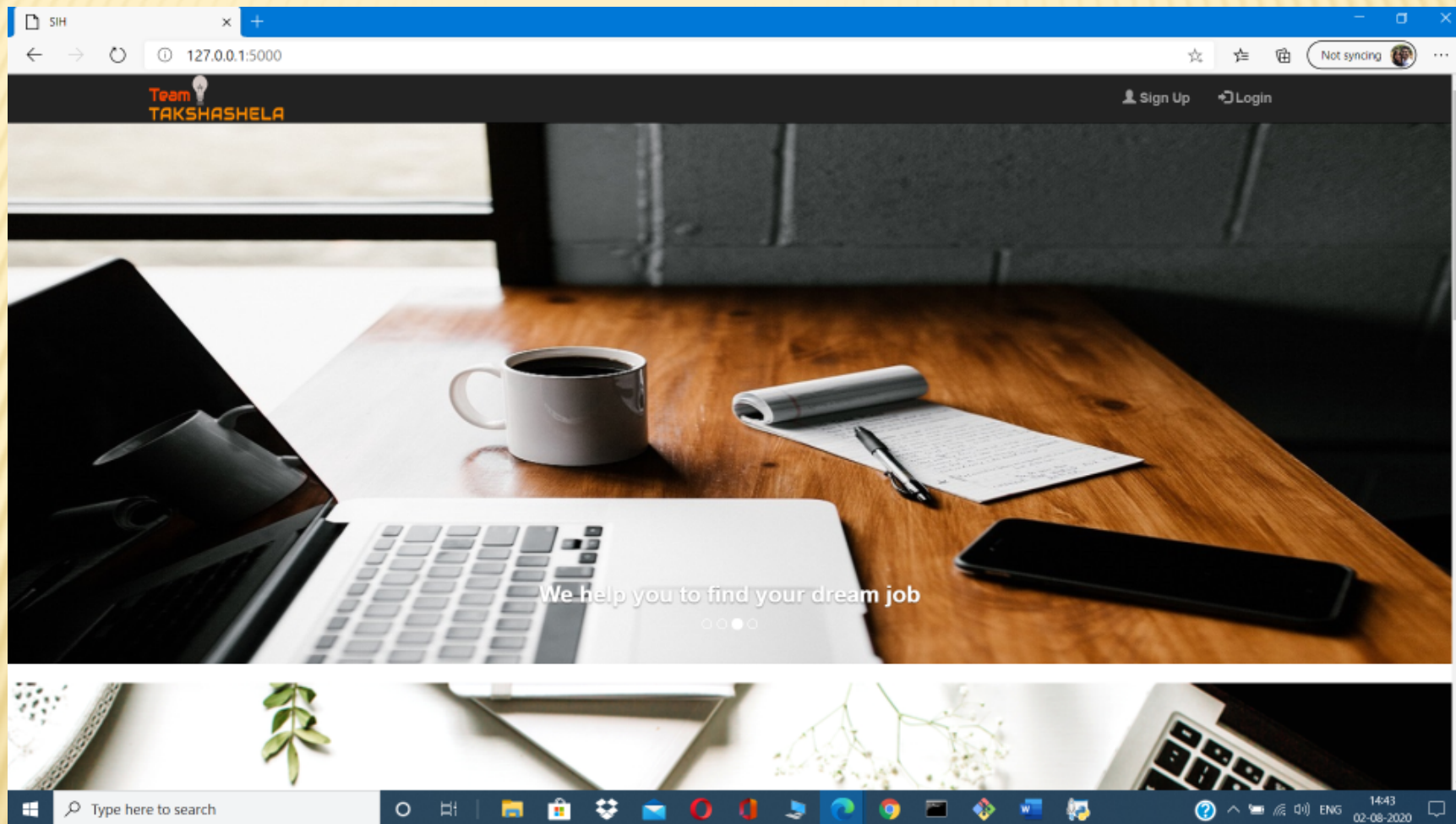
**We are developing our main page which will take various inputs which will be processed with the backend connectivity.**

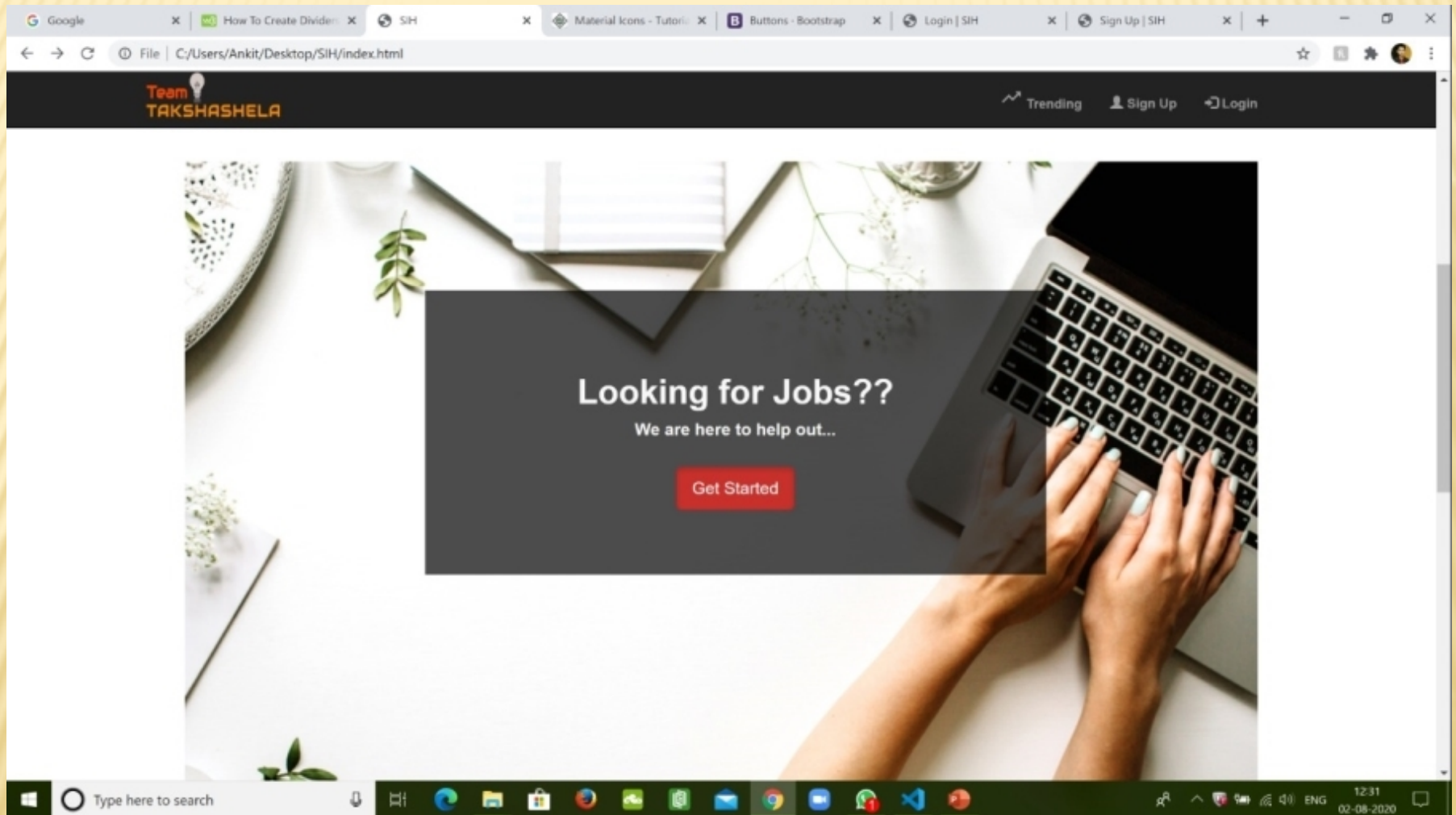
**We are also working on the result page where we will show the predicted out with different functions.**

# WIREFRAME









Google

How To Create Dividen

SIH

Material Icons - Tutori

Buttons - Bootstrap

Login | SIH

Sign Up | SIH

File | C:/Users/Ankit/Desktop/SIH/index.html

Team TAKSHASHELA

Trending Sign Up Login

Job Opportunities in Top 20 Jobs Title

| Job Title              | Job Opportunities (Approx.) |
|------------------------|-----------------------------|
| Web Development        | 320                         |
| Frontend Development   | 240                         |
| UI/UX Design           | 170                         |
| Full Stack Development | 165                         |
| JavaScript             | 160                         |
| ReactJS                | 140                         |
| AngularJS              | 135                         |
| NodeJS                 | 125                         |
| Python                 | 120                         |
| Java                   | 115                         |
| PHP                    | 110                         |
| SQL                    | 105                         |
| JavaScript             | 100                         |
| Python                 | 90                          |
| JavaScript             | 85                          |
| Python                 | 80                          |
| JavaScript             | 75                          |
| Python                 | 70                          |
| JavaScript             | 65                          |
| Python                 | 60                          |
| JavaScript             | 55                          |
| Python                 | 50                          |
| JavaScript             | 45                          |
| Python                 | 40                          |

Introduction

"The best way to predict the future is to invent it"

-Abraham Lincoln

We are here to help you to create a bright future. Your job search goal will be to find and secure that job. This site reaching out to help you in your job search as we walk down that path . The key to your personal success involves using the appropriate techniques to gain a competitive edge by putting this information to use. This site is not a one-size-fits-all formula. It requires your interaction and your personal touch.

Type here to search

12:31

02-08-2020

Google

How To Create Dividen

SIH

Material Icons - Tutori

Buttons - Bootstrap

Login | SIH

Sign Up | SIH

File | C:/Users/Ankit/Desktop/SIH/login.html

Team  
TAKSHASHELA

Trending

Sign Up

Login

Login to Continue


Sign In

Email


Password

Login here


Don't have an account? [Sign Up Here](#)



उत्तराखण्ड राज्य




SMART INDIA  
HACKATHON  
2020



BHARATI VIDYAPEETH  
PUNE

Type here to search



12:32  
02-08-2020



Google

How To Create Dividers with CSS

SIH

Sign Up | SIH

Home | SIH

File | C:/Users/Ankit/Desktop/SIH/signup.html

Team  
TAKSHASHELA

Trending

Sign Up

Login

Sign Up

Name

Enter Name

Email

Email Address

Password


Password


City


City

Submit


Already have Account?? [Sign In Here](#)

  
उत्तराखण्ड राज्य

 SMART INDIA  
HACKATHON  
2020

  
BHARATI VIDYAPEETH

Type here to search



12:41  
02-08-2020

**THANK YOU**