REPORT:

1. Mental Health Survey:

Objective:
We often come across a question wherein we ask ourselves, "Should we change the job?" or "Do I really like to work at this place?". To answer your question, we are asking the survey respondent few questions and based on that we are predicting the results.

Basic Layout:
The main objective of the project was to evaluate the overall mental health survey of the employees. The survey is only intended for the employed people. It has over 25 attributes based on which we predict whether the person is happy at the place where he/she is working or do they need to make a change.

The model used for prediction is trained using the "Kaggle Dataset", https://www.kaggle.com/osmi/mental-health-in-tech-survey. And to make the survey user friendly, I developed the webpage wherein user can simply chose the correct option and click submit. The front-end of the webpage is created using "Python Flask" and used Data Science for predicting the results in the graphical form.

Working:
1. The project started with importing a csv file which consisted the survey of more than 1200 people in their tech industry. The data was cleaned and preprocessed and was later divided for testing and training purpose.
2. The next phase was creating a model which can efficiently predict whether the person requires treatment based on the survey. The various classification algorithms used were Logistic Regression, SVM and Bagging model.
3. Based on the K-cross validation results, we chose Logistic regression as our base model to decide on the survey results. The accuracy given by Logistic regression was ***71.18%***.
4. Once the modeling was done, we moved towards building the front end of the web page which included a Survey page as well as the suggestion page, which possibly gives you the attributes behind your mental illness.
5. The front end was designed primarily using the Flask python library and was designed using HTML and CSS. There were 25 attributes based on which the user's survey results were determined. Depending upon the results, we determine whether the user requires an assistance or not, if it requires assistance, then we redirect the user to the specific supportive page or else the user was given a positive lookout.
6. Once the front end was designed the python models were integrated with the front end using function module class.
7. The last stage included the designing of a Suggestion page, which generates various charts giving you a possible glimpse of the reason behind your illness.

Results:
1. Based on the answers submitted by the participate, the model will answer True (The person is happy at the present job) or False (The person can think of changing the job).
2. Moreover, when the result is negative, we suggest the person a number of reasons what could be the reason causing them negative mental health. To which these candidates could either work on or they may switch the job to a place wherein that cause may not exists.

Commands to execute the application:
1. Download the project: [https://github.com/ChaitanyaKalantri/Hackaton]
2. Navigate to the "FlaskApp" folder.
3. Open terminal and paste the path of the "FlaskApp" folder.
4. Run the command. "python app.py"
5. Open the link [http://localhost:5000/] in the browser.
6. Fill the survey and get the results easily.

The complete code could be found here.
https://github.com/ChaitanyaKalantri/Hackaton/tree/master/HackHealth%20Feb18

Some Pictorial Representation of the above project:

1. **Positve Respose:**
    a. Filling of the survey form

Fig 1: Filling the survey form part 1

Does your employer provide mental health benefits?
- ⦿ Yes
- ○ No
- ○ Don't know

Do you know the options for mental health care your employer provides?
- ⦿ Yes
- ○ No
- ○ Not Sure

Has your employer ever discussed mental health as part of an employee wellness program?
- ⦿ Yes
- ○ No
- ○ Dont know

Does your employer provide resources to learn more about mental health issues and how to seek help?
- ⦿ Yes
- ○ No
- ○ Dont know

Is your anonymity protected if you choose to take advantage of mental health or substance abuse treatment resources?
- ⦿ Yes
- ○ No
- ○ Don't know

How easy is it for you to take medical leave for a mental health condition?
- ○ Very easy
- ⦿ Somewhat easy
- ○ Don't know
- ○ Somewhat difficult
- ○ Very difficult

Do you think that discussing a mental health issue with your employer would have negative consequences?
- ⦿ Yes
- ○ No
- ○ Maybe

Do you think that discussing a physical health issue with your employer would have negative consequences?
- ⦿ Yes
- ○ No

Fig 2: Filling the survey form part 2

Do you think that discussing a physical health issue with your employer would have negative consequences?
- ⦿ Yes
- ○ No
- ○ Maybe

Would you be willing to discuss a mental health issue with your coworkers?
- ○ Yes
- ○ No
- ⦿ Some of them

Would you be willing to discuss a mental health issue with your direct supervisor(s)?
- ○ Yes
- ○ No
- ⦿ Some of them

Would you bring up a mental health issue with a potential employer in an interview?
- ○ Yes
- ⦿ No
- ○ Maybe

Would you bring up a physical health issue with a potential employer in an interview?
- ○ Yes
- ⦿ No
- ○ Maybe

Do you feel that your employer takes mental health as seriously as physical health?
- ⦿ Yes
- ○ No
- ○ Dont know

Have you heard of or observed negative consequences for coworkers with mental health conditions in your workplace?
- ⦿ Yes
- ○ No

Any additional notes or comments.
Thanks for the survey

Submit

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Fig 3: Filling the survey form part 3
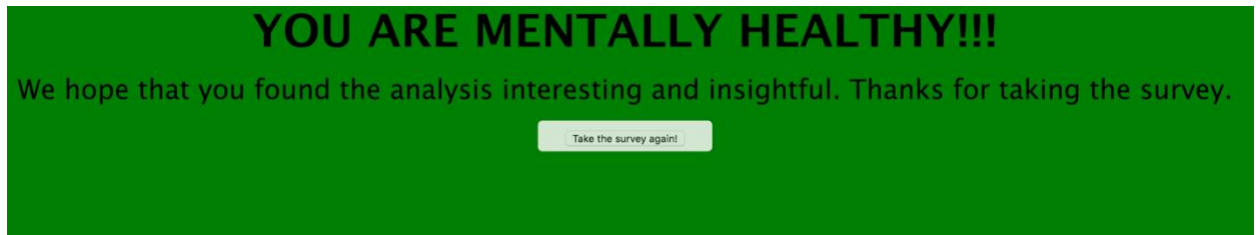
b. Results of the survey form filled:

Fig 4: Positive result of the survey

2. **Negative Respose:**

a. Filling of the form

Fig 5: Filling the survey form part 1

Mental Hack Survey

Want to know how satisfied you are with the current job? Take our survey :)

Name:
Rhong Zhang

Age:
40

Gender:
○ Male
○ Female
○ Other

Country:
United States

State:
New York

Are you self employed?
○ Yes
○ No

Do you have a family history of mental illness?
○ Yes
○ No

How many employees does your company or organization have?
6-25

Do you work remotely (outside of an office) at least 50% of the time?
○ Yes
○ No

Is your employer primarily a tech company/organization?
○ Yes
○ No

Does your employer provide mental health benefits?
○ Yes

Fig 6: Filling the survey form part 2

Does your employer provide mental health benefits?
○ Yes
○ No
○ Don't know

Do you know the options for mental health care your employer provides?
○ Yes
○ No
○ Not Sure

Has your employer ever discussed mental health as part of an employee wellness program?
○ Yes
○ No
○ Dont know

Does your employer provide resources to learn more about mental health issues and how to seek help?
○ Yes
○ No
○ Dont know

Is your anonymity protected if you choose to take advantage of mental health or substance abuse treatment resources?
○ Yes
○ No
○ Don't know

How easy is it for you to take medical leave for a mental health condition?
○ Very easy
○ Somewhat easy
○ Don't know
○ Somewhat difficult
○ Very difficult

Do you think that discussing a mental health issue with your employer would have negative consequences?
○ Yes
○ No
○ Maybe

Do you think that discussing a physical health issue with your employer would have negative consequences?
○ Yes
○ No

Fig 7: Filling the survey form part 3

YOU MIGHT CONSIDER MAKING FEW CHANGES TO IMPROVE YOUR MENTAL HEALTH CONDITIONS
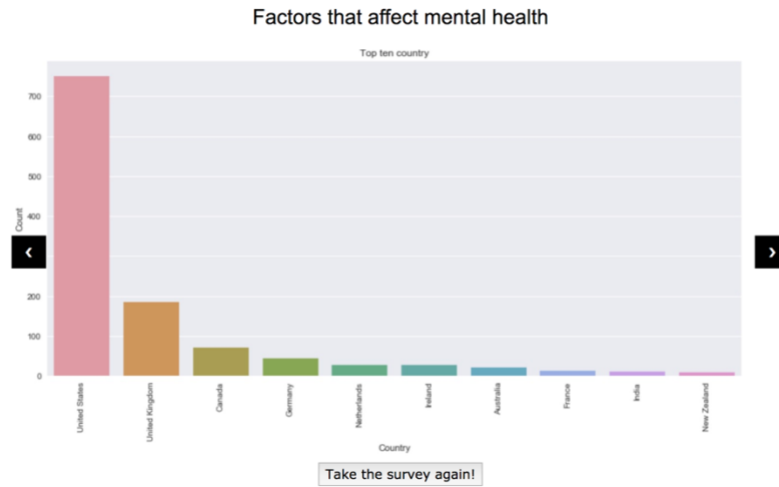

Fig 7: Negative result and the potential reason 1: Country in which you are leaving
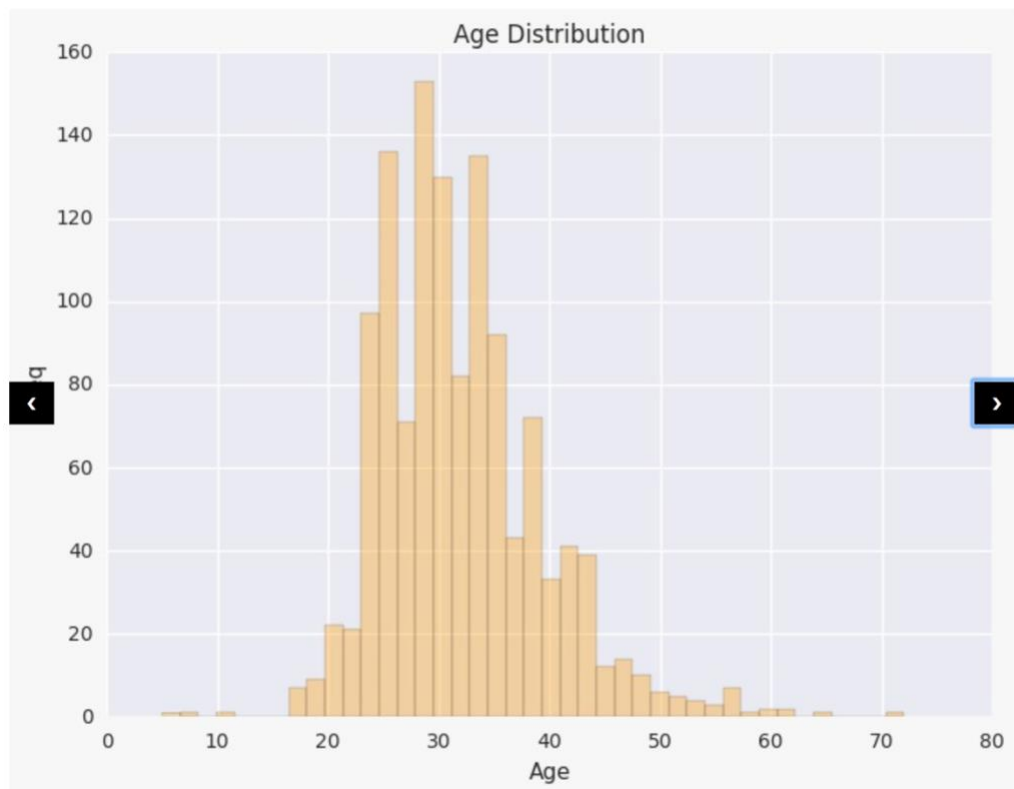

Fig 8: Negative result and the potential reason 2: Age group of the respondent

YOU MIGHT CONSIDER MAKING FEW CHANGES TO IMPROVE YOUR MENTAL HEALTH CONDITIONS
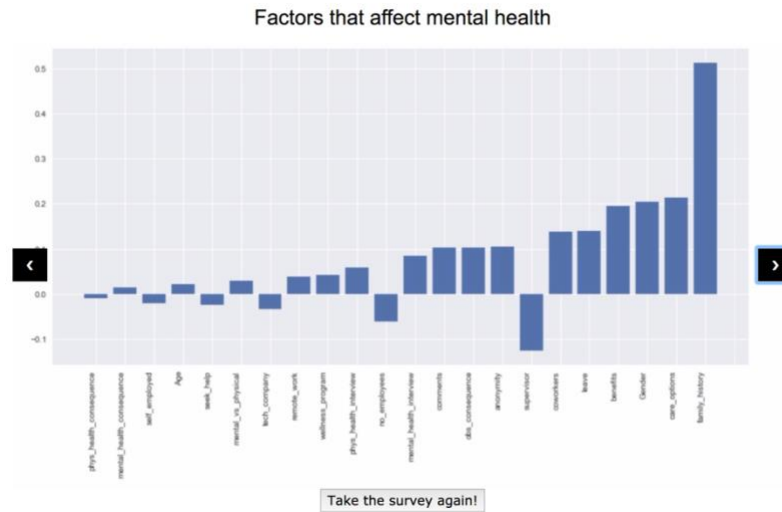
Factors that affect mental health

Take the survey again!

Fig 9: Negative result and the potential reason 3: Some heredity mental disorder in the family
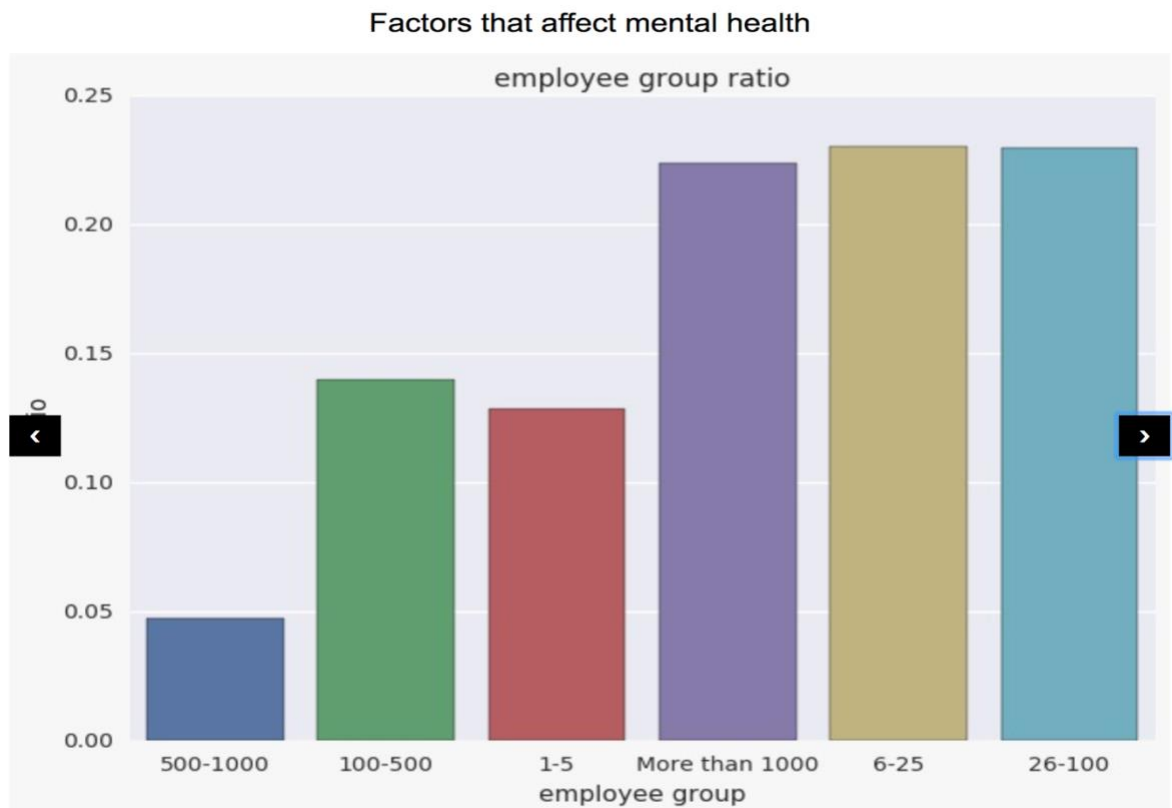
Factors that affect mental health

Fig 10: Negative result and the potential reason 4: Number of employees in the company
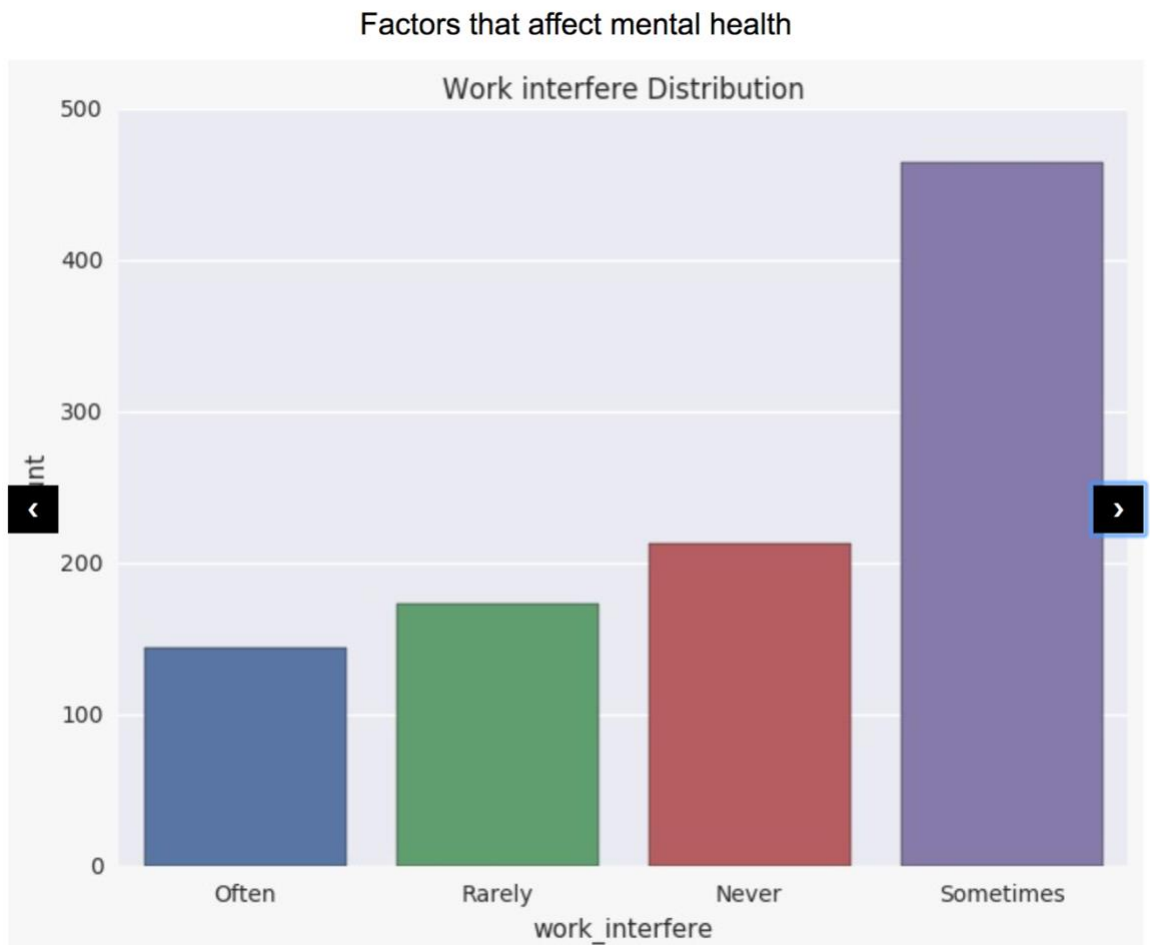
Fig 11: Negative result and the potential reason 5: Work Interference in the company