Business Understanding

Chakravardhan Reddy - IMT2014015
Nithish - IMT2014016
Sandeep Tadepalli - IMT2014057
Keerthi Chandra - IMT2014064
Abhijnu Yadlapalli - IMT2014065

1 Introduction:

Stress is an often-overused word that can incite a physical reaction simply by mentioning it. In a recent research conducted by Willis Towers Watson, employers worldwide cited stress as the foremost workplace issue.Studies have shown being unhappy with or unfulfilled by work can take a toll on our health, relationships, and even lifespan. So, our analysis will help employees and companies to manage and even reduce employee stress which serves to boost employee well-being.

2 Business Objective:

The objective is to measure attitudes towards mental health and frequency of mental health disorders of employees in a workplace. We are interested in gauging how mental health is viewed within the tech/non-tech workplace, and the prevalence of certain mental health disorders within the industry. Companies can use this data to drive the work in raising awareness and improving conditions for those with mental health disorders in the tech/non-tech workplace.

3 Target Audience:

Employees who are working in the low or medium level (not CXO's) in the tech/non-tech companies. Our analytics can be used by the companies in raising awareness and improving conditions for those with mental health disorders in companies.

4 Data Sources:

There are two datasets available which could aid towards completion of the project. A dataset is from a 2014 survey which has over 1200 responses, measures attitudes towards mental health and frequency of mental health disorders in the tech workplace. Another dataset that is currently having over 1400 responses, it is an ongoing survey and aims to measure attitudes towards mental health in the tech workplace. Both of them are available in Kaggle in the form of CSV format.

The data is expected to be ready for analytics. The data has also been assumed to be accurate in light of the fact that it has been obtained directly from the Open Sourcing Mental Illness research website. The project serves an academic purpose and hence, the emphasis will be on understanding the whole procedure.

5 Determining Data Mining Goals:

5.1 Descriptive Analysis:

This analysis helps in understanding the data better by summarising the data by using few visualization techniques. The questions below helps you in better understanding of the mental health of an employee.

i What are all the key factors that contribute for mental health?

ii How does the mental health vary across companies(tech, non-tech)?

iii How does the mental health vary based on gender, anonymity, countries etc?

iv How does the mental health vary across the above three factors in 2014 and 2016?

5.2 Clustering:

Clustering based on certain features like age, gender, countries etc to identify the distinct group of people for the improvement of the better mental health of an employee in a company.

5.3 Exploratory Analysis:

The questions below helps in you determining the key factors that contribute for the mental health of an employee in a workplace. A company or an organization can now provide customizable work environment thereby providing their employees a healthy work-life balance.

i Exploring how mental health varies across the workplace type and size of the company(both for tech and non tech)

ii Computing and comparing the effect of every health aspect in the dataset that contributes towards the mental health of an employee.

iii Predicting the mental health of a tech employee given the factors affecting the health of a general employee.

5.4 Associative Rules:

The following questions helps you determine what went wrong in managing the employees in a hierarchical way. So the company can now try to fill in the communication gap between the employees and their direct supervisor for betterment of the mental health of their employees.

i Is there a relationship between your direct supervisor and the mental health of the employee? i.e will you be comfortable in discussing your mental health with your direct supervisor and do you feel that your direct supervisor takes your mental health seriously?

5.5 Data Mining Success Criteria:

- Descriptive analysis leads to the better understanding of the data by using few visualization techniques.

- Clustering helps to identify the distinct group of people for the improvement of the better mental health of an employee in a company.

- Helps company or an organization to provide customizable work environment that helps employees in maintaining balanced life.

6   Producing a Project Plan:

6.1   Project Plan:

Phase	Time
Business Understanding	2weeks
Data Understanding	2weeks
Data Preparation	2weeks
Modelling	2weeks
Evaluation	1 weeks

6.2   Tools and Techniques:

R , Excel, Tableau

7   References:

◇ https://www.kaggle.com/osmi/mental-health-in-tech-survey

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◇ CRISP_DM_IBM.pdf - Business Understanding

◇ https://www.business.com/articles/mental-wellness-in-the-workplace-5-ways-to-foster-employee-well-being/

◇ http://www.hrinasia.com/employee-retention/inclusion-on-mental-wellness-benefits-to-drive-consistent-employee-performance/