MARK5826 Individual Research Project

**Decreasing Mental Health In Workplace**

My Mission Statement: Assist employees and companies to decrease mental health factors in workplace.

**Part 1: The Founders**

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Master of information technology, majoring in data science field with four years’ e-commerce technology background. Responsible for the coding and data analysis.

Strengths: Coding, problem solving, data analyse.

**Part 2: About the project**

**Problem Statement:** Mental health and frequency of mental health disorders are serious problem in working place. The potential factors to effect mental health in working place are worth to analyse.

**Project Aim:** Finding the factors that can cause mental problem in work and help institutions and companies to improve working environment.

**The Problem**

Mental illness is the leading cause of long-term workplace absence in most developed countries. Mental illness is also associated with working environment like the pressure from supervisor and other employees, which will cause the lower productivity. Addressing this issue is a major economic as well as health matter.

**The Solution**

Based on the dataset which from a 2014-2016 survey that measures attitudes towards mental health and frequency of mental health disorders in the tech workplace, I will be basing its research to find the potential threat to cause the mental health in workplace. The data set I have access to include information about basic information of mental health disorders like age, gender, mental health history country as well as different kinds of attitudes toward workplace, like work remotely, the influence of employer and so on. Using this data I hope to analyse the contributions of mental health in workplace.

Through discovering potential factors in the data set I hope to help companies and institutions to focus on mental health disease and improve their working environment.

**Part 3: Plan**

**Table: Project Schedule**

|  |  |
| --- | --- |
| **Week** | **Task** |
| 5th Sep | Interim Report |
| 3rd Sep | Developing plan |
| 10th Sep | Data Cleaning and descriptive analysis |
| 15th Sep | Interpretation of data and identification of trends |
| 17th Sep | Data visualisation and draft report |
| 19-20th Oct | Final Presentation / Report |

**Methodology**

In order to predict the outcome of the potential factors of mental health, the following tools are used:

* Tableau Desktop 2018.1

We utilize tableau to analyze data and create data visualizations, publish data sources as well as workbooks to tableau Server

* Python Scripting Environment   
  We choose python as the programming language to implement the machine learning algorithm, train our model, and test the hypothesis.
* Kaggle

We got the original prototype of this project from kaggle, kaggle machine   
           learning competition inspire us to choose this project as our group work, and      
           kaggle kernels also provide a ideal cloud based work bench for our data     
           science analyst.

Data source

This dataset is from a 2014 survey that measures attitudes towards mental health and frequency of mental health disorders in the tech workplace.

File descriptions

* survey.csv - the raw data set
* survey2016.csv - the raw data set

We will use machine learning to train data and make a data model based on python skills. After the process of data processing like cleaning, classification and so on, we will use logistic regression to analyses and record our data at the first stage, which is followed by the probability of the strategy change according to the performance of result. Based on the result of data, the data will be presented by tableau which will make result and prediction more visualiable and understandable.

**References**

West Lafayette, Indiana, United States, *‘Mental Health in Tech Survey*, < https://www.kaggle.com/osmi/mental-health-in-tech-survey >,

< https://www.kaggle.com/osmi/mental-health-in-tech-2016#mental-health-in-tech-2016-neo4j-20161114.zip >

Timestamp

Time the survey was submitted

Age

Respondent age

Gender

Respondent gender

Country

Respondent country

state

If you live in the United States, which state or territory do you live in?

self\_employed

Are you self-employed?

family\_history

Do you have a family history of mental illness?

treatment

Have you sought treatment for a mental health condition?

work\_interfere

If you have a mental health condition, do you feel that it interferes with your work?

no\_employees

How many employees does your company or organization have?

remote\_work

Do you work remotely (outside of an office) at least 50% of the time?

tech\_company

Is your employer primarily a tech company/organization?

benefits

Does your employer provide mental health benefits?

care\_options

Do you know the options for mental health care your employer provides?

wellness\_program

Has your employer ever discussed mental health as part of an employee wellness program?

seek\_help

Does your employer provide resources to learn more about mental health issues and how to seek help?

anonymity

Is your anonymity protected if you choose to take advantage of mental health or substance abuse treatment resources?

leave

How easy is it for you to take medical leave for a mental health condition?

mental\_health\_consequence

Do you think that discussing a mental health issue with your employer would have negative consequences?

phys\_health\_consequence

Do you think that discussing a physical health issue with your employer would have negative consequences?

coworkers

Would you be willing to discuss a mental health issue with your coworkers?

supervisor

Would you be willing to discuss a mental health issue with your direct supervisor(s)?

mental\_health\_interview

Would you bring up a mental health issue with a potential employer in an interview?

phys\_health\_interview

Would you bring up a physical health issue with a potential employer in an interview?

mental\_vs\_physical

Do you feel that your employer takes mental health as seriously as physical health?

obs\_consequence

Have you heard of or observed negative consequences for coworkers with mental health conditions in your workplace?

comments

Any additional notes or comments

