Mental Health in Technology Industry
Executive Summary
Tianyi Tan

The tech industry is a high-growth, fast-paced world where people work hard to meet high expectations. Management has realized the importance of mental health and started to examine the accessibility to mental health care options. Based on the statistics in this article (Snobar, 2018), 72% of the entrepreneurs surveyed by University of California self-reported mental health conditions, which revealed the prevalence of concerns for mental health and the consequences of neglecting.

As the mental health concerns growing in the industry, the treatment seeking process and available options provided in the workplace have been becoming vital to the healthy growth of the industry. Thus, two research questions were motivated and answered:

1. How does the treatment seeking and attitudes toward mental health illness vary by geographic location?
2. What are the strong predictors of seeking mental health treatment in the workplace?

To answer the two questions listed above, the result of a 2014 survey from Open Sourcing Mental Illness (OSMI) was analysed downloaded via Kaggle. This dataset contained employees' personal information (e.g., age, gender, country, state), feedbacks about the available resources perceived in the workforce, insights related to whether an employer recognized the importance of mental health care perceived by employees and available information about their mental health status (e.g., family history, treatment). The feature "treatment" which recorded the response of "Have you sought treatment for a mental health condition?" were used as a target class label for classification and prediction

Data visualization such as bar chart and choropleth map revealed that the proportions of people had sought treatment were high in the United States, United Kingdom, Canada and Germany. In different states in the United States, California (138) had the highest count for people had treatment, followed by Washington (70) and New York (57).

To identify the strong predictors, four machine learning techniques: logistic regression, K-Nearest-Neighbors, Decision Tree and Naïve Bayes were utilized and their performance was evaluated by different performance metrics. All of them achieved over 70% accuracy. Logistic regression has the highest accuracy (81.35%) and followed by Gaussian Naïve Bayes (80.95%). The important features of logistic regression and decision tree revealed that for employees to seek treatment for mental health issue, they seemed to believe that the mental health condition might interfered with their work. Family history of mental illness also made them more likely to seek for help. Companies also played an important role by providing resources to learn more about mental health, options for mental health care and mental health benefit. They were willing to discuss the issue with their co-workers instead of direct manager and preferred to have their anonymity protected.

The data analysis concluded that employees who had sought treatment in their past for mental health conditions tended to work in developed countries and states with big technology developed in the United States. They also held the belief that mental health conditions interfered with their work and had family history. Thus, the implication for the technology firms would be providing more mental health care options and educated their employees with their options and benefits. Also, they should offer a safe environment for them to express their feelings and protected their privacy. It is important to remember that wellbeing takes different forms for different people. Managers in the tech industry need to create a culture in their teams where employees can unplug from their device and seek help anytime when they feel their work is interfered by mental health conditions.

A future direction for this analysis would be improve the survey design and avoid ambiguity of the questions so that the answer could be more direct and relevant for future prediction.