**Capstone Project- Springboard**

**Title: Predicting Mental Health Issues in the Tech Sector**

**Problem Statement**

According to the National Institute of Mental Health, almost 18% of all adult Americans were diagnosed with mental illness in 2015. The direct and indirect costs of mental health issues to both individuals and their employers can be high. The most frequently cited ways that poor mental health among a company’s employees can negatively impact the company’s bottom line include: lost employee productivity, poor performance in the workplace, high rates of worker absenteeism or employee turnover, accidents on the job, as well as increasing costs related to insurance premiums and medications (Harvard Health, 2010).

Recent research has found that when companies actively promote mental health wellness in the workplace, that there are significant financial benefits as well as improved employee moral (Harvard Health, 2010). As part of its efforts to better understand how to address work place mental health concerns, an employer could look to data science and the development of statistical models that can accurately predict the risk of mental health issues. Developing such a model could enable employers to work proactively to promote mental health well-being in their companies, which could improve their workplace environment and help reduce costs associated with mental health illness.

The proposed project aims to investigate factors associated with mental health issues among workers in the technology sector. Previous analyses Open Source Mental Illness 2014 data set, have not found that tech workers have a higher rate of mental health issues than those in other sectors. That said, given the high prevalence of mental health issues among adults, all employers must be prepared to address this issue.

**Data**

Data for this project will be obtained from the Open Source Mental Illness Project—The 2014 Mental Health in Tech Survey includes 1259 observations and 27 variables including: demographic information, workplace information and attitudes regarding mental health care and consequences of seeking mental health care. A follow up 2016 survey including 1400 observations is also available for possible further analyses.. The data is open access and available for public use here : <https://www.kaggle.com/osmi/mental-health-in-tech-survey> and here: <https://www.kaggle.com/osmi/mental-health-in-tech-2016>

**Analysis and Approach**

This project will attempt to :

1. Answer the question as to whether or not > 50% remote work is associated with increased rate of mental health issues in the tech sector
2. Build a model that can predict the development of mental health issues among individuals working in the tech sector. Variables that may be tested in the regression analysis include:
   1. demographic variables [ **assorted variables]**
   2. family history of mental health issues **family\_history**
   3. remote work, **remote\_work**
   4. self employment status **self\_employed**
   5. presence of work sponsored wellness program **wellness\_program**
   6. perceived social support among coworkers **coworkers**

**Deliverables:**

Deliverables include the code for the regression analysis and predictive model and a slide deck presenting the problem, data set, analysis, code and findings as well as directions for future study. Materials will be posted to Github.

References

Harvard Health Publications(2010). Mental health problems in the workplace. Retrieved from: <http://www.health.harvard.edu/newsletter_article/mental-health-problems-in-the-workplace>

NIMH (n.d). Mental illness among adults. Retrieved from: https://www.nimh.nih.gov/health/statistics/prevalence/any-mental-illness-ami-among-us-adults.shtml