

# Mental Health in Tech

Mental health problem shows the same important with physical health, because it can also affect people's behavior. In America, 18% of adults have mental health condition, which means almost in 5 people there will be at least one person has mental health problem (based on the report of "[2018 state report of mental health America](#)"). However, mental health problem is not easy to be recognized as physical health problem. Most of people they even don't realize they are suffering from mental health issue. As a person who is going to enter the tech industry, I am very concern about this problem. And as high condensed mind using career, the tech industry should pay more attention on their employee's mental health.

This project is using [OSMI mental health in tech survey 2016](#), which includes more than 1400 responses from all over the world, to predict employee's mental health condition based on some information of him. Due to the surveys were filled in by people working in related area, there are many kinds of answers for one question. So data cleaning is very special for the study. And there are more than 60 questions on this survey, some statistical analysis would be necessary for feature selection. Since the data set is all about categorical characters, and my prediction is binary classification problem, I tried some machine learning methods like: SVM, decision tree, random forester, logistic regression, XG boost and a simple neural network. Comparing these methods, I selected four best models for my ensemble model, which gives an average precision of 0.72.

Based on the prediction model, the employee can realize whether they are suffering from mental health issue and decide whether they need some protection or seeking help; the employer can get information to improve the employee's health benefit; government can get some suggestions on controlling the national mental health problem.