The average employee turnover rate in the US healthcare system is 19% (2019 National Health Care Retention & RN Staffing Report). Among them, Certified Nursing Assistant professionals have the highest turnover rate of 32% as of 2018. The nursing labor shortage will reach 1.13 million by 2024. The numbers are significantly increasing in all healthcare roles every year.

Besides the fact that healthcare professionals are performing critical functions of ensuring public health and safety, their turnover is extremely costly for healthcare providers. Due to the employee churn, hospitals lose between $4 and almost $7 million dollars per year on average. Besides the cost, it disrupts the organizational operations and negatively impacts on patient's experience individually as well as overall care quality.

The goal of our Hackathon project is to identify healthcare professionals at high turnover risk in a given company. To do so, we would first need to consider their behavior drivers by different variables and examine causation with the intent to leave. Studies show that three main factors healthcare employees think as primary reasons for leaving are work-life balance, career advancement, and relocation. Most often, job stressors and burnout are positively correlated with healthcare employees' intent to leave. Apart from job stressors, compensation and related benefits will influence job satisfaction and have a stronger effect on retention. We would also consider healthcare professionals' demographics and job categories. Overall, the goal is to see based on the survey data, how different variables affect job satisfaction and eventually intent to leave.

Turnover in healthcare will directly impact business outcomes. Besides interrupting the normal organizational processes, it will affect the care of individual patients. It will also cause loss of productivity, reduced morale, and increased stress among remaining employees. Financially, turnover poses a huge economic burden on businesses. The total cost associated with each healthcare employee is significant and includes costs of recruiting, onboarding and training.

The current Coronavirus pandemic has once again proven the critical importance in addressing healthcare workforce retention. As one of the fastest-growing sectors, new roles increase demand for healthcare professionals while supply decreases every year. Understanding the determinants of turnover will help the company in our example to target the employees at high risk of leaving and modify their current practices to create a supportive workplace for everyone. By finding out the key factors that influence turnover, the healthcare company will hopefully be able to retain their employees and avoid the negative economic impact that their departure would have had.