**Business Understanding**

The attrition of employees will increase the company's opportunity cost. In addition to the cost of training and other expenses of new employees, the company must also bear a lot of risks, for example, the sudden departure of employees will cause the interrupted of executing tasks, and the company's operating efficiency will be greatly reduced. All of these will have a negative impact on the company's future development. In order to reduce the risks and uncertainty caused by employee resignation, improve the company's operational efficiency, and reduce the company's labor costs, we could analyze some existing data to come out with a list of employees who may leave, before the employee voluntarily resigns. This forecasted list can help the company better planning ahead. For example, it can target on those employees who might leave, try to investigate the reason and listen to their voices; search the relationship between supply and demand in the professional market, and actively adjust salaries and job design. Most importantly, it can also select candidates for the position of the employee in advance. Therefore, company could minimize the cost caused by the employee's attrition, and maintain a stable operational efficiency.

In most cases, to obtain an employee’s performance rating would require a continues assessment of their work. We will analyze how the education field, distance from home job involvement, job role, job satisfaction, work life balance, etc. impact the performance rating. This helps us to understand the employee's behaviors in order to predict their future performance. Thereby, this will improve the hiring process as well as decrease uncertainties in human resource management, operation, and administration.

The company would gain the ability to access one’s potential performance rating before committing to hire that person. Hence, to some degrees of extend, the company mitigated risks in hiring incompatible people.

**Data Understanding & Preparation**

Since we are trying to predict the working performance right before hiring, we will mainly focus on pre-work variables. The main data variables we will include in our instance are Education, Distance from home, Education Field and Monthly Income, etc.

**Visualizations**

**Modeling**

**Evaluation**

**Deployment**

**Appendix:**