



Final Project Kick-off Presentation

Dario Cantore, Calvin Chi, Josiah Davis, Daniel Lee

Our question in words

- The main question we want to answer is if salary has an effect on whether an employee  leaves a company or not, and how this changes with the salary level.
- We are also interested in exploring whether the following variables have effects on whether an employee leaves a company:
 - Average monthly hours
 - Satisfaction level 
 - Last evaluation


Our target parameter




- We are interested in the average treatment effect. In the case of salary with 3 levels (“low”, “medium”, “high”) we will look at the effect an increase in salary by one “level” has on whether an employee leaves or not



Our data

- From Kaggle: <https://www.kaggle.com/ludobenistant/hr-analytics>
- In total 14,999 observations
- Company dataset consisting of whether an employee left and 9 other variables
- Variables include: Last evaluation, employee satisfaction level, salary, average monthly hours, work accidents 

Challenges we (might) face

- Deciding on how to simplify our DAG
 - Direction of arrows (do average monthly hours affect satisfaction or the other way around?) 
 - Should we group some variables (e.g. average monthly hours and satisfaction) in a new variable (e.g. W1), so we do not need to worry about for example the direction of arrows?
- Identifiability
 - Which independence assumptions / exclusion restrictions should we make?
- Which libraries should we use for our superlearner?