**DRILL:**

Let's say we work at a credit card company and we're trying to figure out if people are going to pay their bills on time. We have everyone's purchases, split into four main categories: groceries, dining out, utilities, and entertainment. What are some ways you might use KNN to create this model? What aspects of KNN would be useful? Write up your thoughts in submit a link below.

This in general is called DATA PROFILING used by credit card companies to profile based on customers payment data.

Here we need to predict if people are going to pay their bills on time. We can categorize based on total amount of purchases into two classes ‘they are going to pay in time’ or ‘be late for paying the bill’.

Based on the amount of purchases if they are high above certain level there may be less chances of paying on time because higher the amount it is difficult to pay on time.

Based on the categories also one can say to some extent about the paying bill in time.

For ex.

If spending more than usual on **dining out** and **entertainment** that person is less likely to pay bill in time since he/she may not work well to pay off the bills.

If entertainment is greater than the groceries bill that means the person is not trying to save money and eventually will not pay on time and vice versa on the contrary.

Some other profiling red flags that are not collected by the above data include spending money at

At a club/bar. maybe you're worried about getting laid off work and will affect paying abiltiy.

At a legal counselor. If divorce/legal dispute is coming ahead, you could become bankrupt.

At a Car repair store…that means you cannot afford a new car.

And checking balance at early wee hours…may be financial worries keeping you awake at night?

Conssistnet Spending money or purchases in usual office working hours indicates he may be laid off.