Excessive Absenteeism

can be tremendously detrimental to workplace productivity. The following study examines absenteeism records at a Brazilian courier company from July 2007 to July 2010, and seeks to effectively model excessive absenteeism based on a variety of factors. This model is then deployed on new data in order to draw conclusions.

For this study, excessive absenteeism is defined as an absence of over 3 hours during any given workday.

Health

When the indicated reason for absence is of Type 1, the probability of excessive absence is high. This is to be expected; Type 1 reasons are serious diseases. Conversely, when the reason for absence is of Type 4 ('light' reasons such as appointments), the probability for excessive absence is generally low.

There are limited data points for Type 2 (pregnancy-related) and Type 3 (poisoning-related) reasons.

Furthermore, for any given reason, individuals with a higher BMI have a higher probability of being excessively absent. A higher BMI is often related to other serious health problems, so this is not surprising.
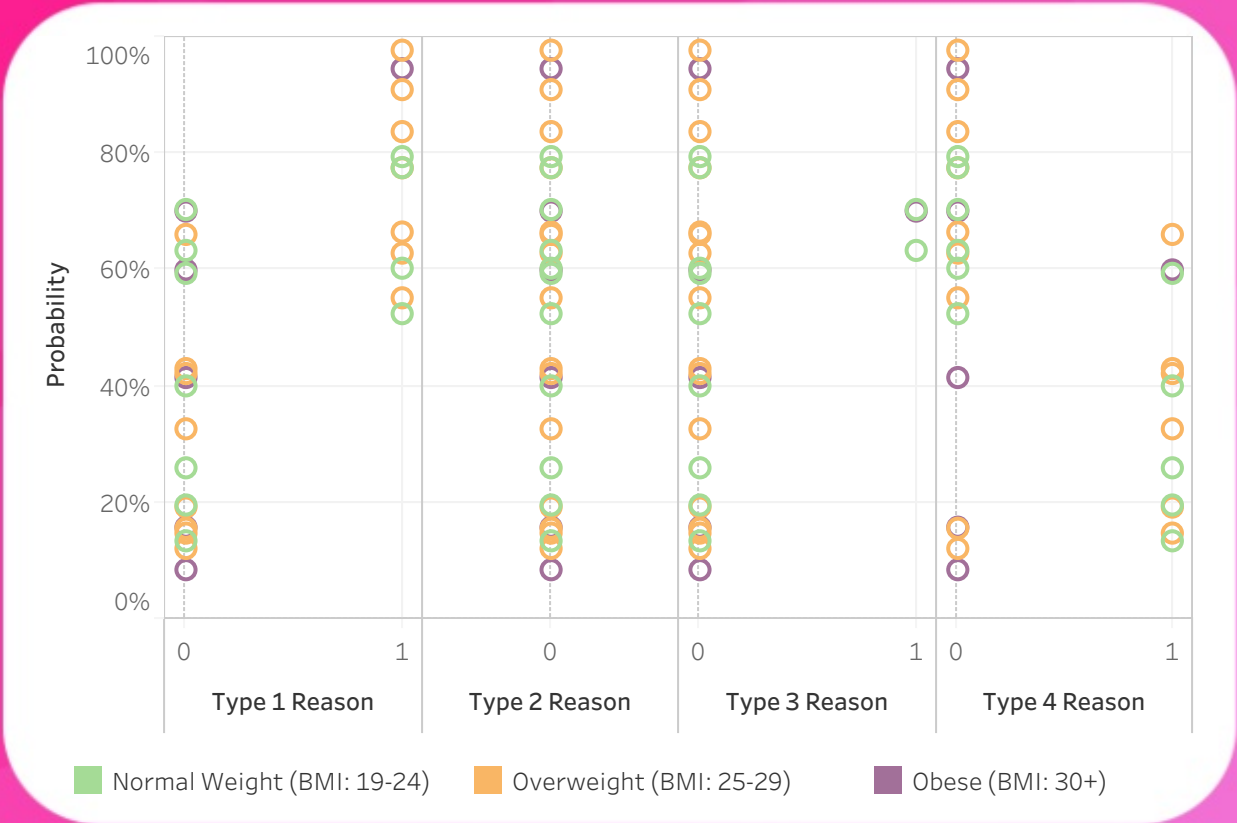
In the graph above, a value of 1 indicates that the identified reason for absence falls under the specified Reason Type; a value of 0 indicates otherwise.
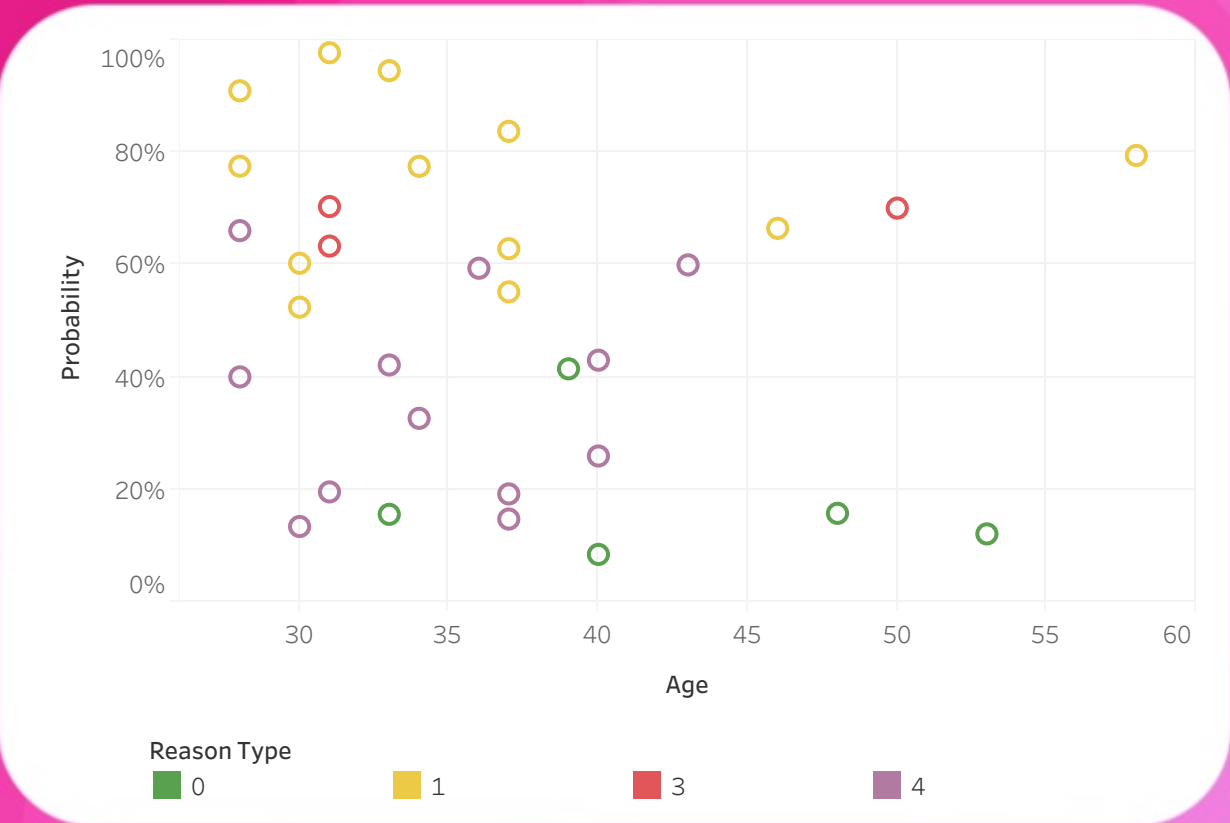
Age

If we disregard Type 1 (serious diseases) and Type 3 (poisoning-related) reasons for absence, we can more accurately observe the true relationship between age and excessive absenteeism. We see that younger workers are more likely to be excessively absent, specifically for 'light' reasons.

Older workers are generally less likely to be excessively absent, and they typically are not absent for 'light' reasons (appointments).

This suggests that older workers may be more responsible, or at least are able to set up their appointments outside of working hours.

Transportation Expense and Children

People with no children have lower monthly transportation expenses per month, but an average probabilty of excessive absenteeism. While these people may be able to live close to work, these are likely the younger individuals identified in the age graph above.

Individuals with 1 or 2 children have monthly transportation expenses hovering around the average amount, and their probabilites for excessive absence vary. However, these probabilites generally increase as the number of children a person has increases; this is not surprising, as individuals with more children have more responsibilites and may have to be away longer to attend to family matters.