



Correlation Trials

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Absenteeism in the workplace

As an employer it is vital that your employees be present and punctual during the workday. Productivity and performance obviously decline when employees are absent.

While exploring the Absenteeism Dataset, one can try to uncover some hidden correlations for workplace absenteeism and if those correlations are statistically significant.



Let's Dive In

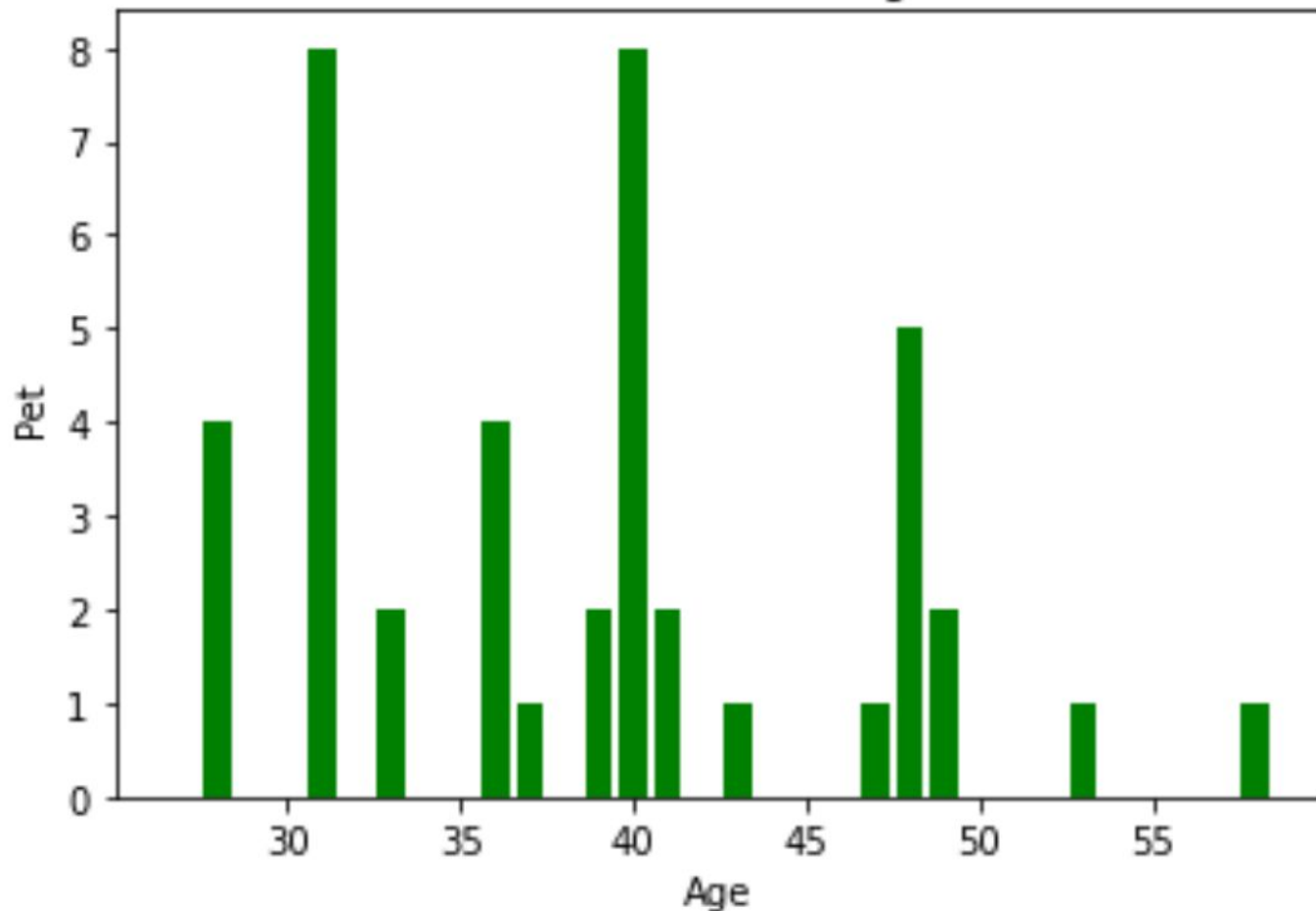
It's always helpful to have a grasp of the information in the data set. First, let's look at employees who pets.

Does having a pet increase the likelihood of employee absenteeism in the workplace?

According to statistics `pearsonr`, there is a correlation.

```
(-0.23122599912658476, 1.9420065119551828e-10)
```

Correlations between Age & Pet



This bar chart displays that the correlation in workplace absenteeism is even stronger when young employees are also pet owners.



Digging Deeper

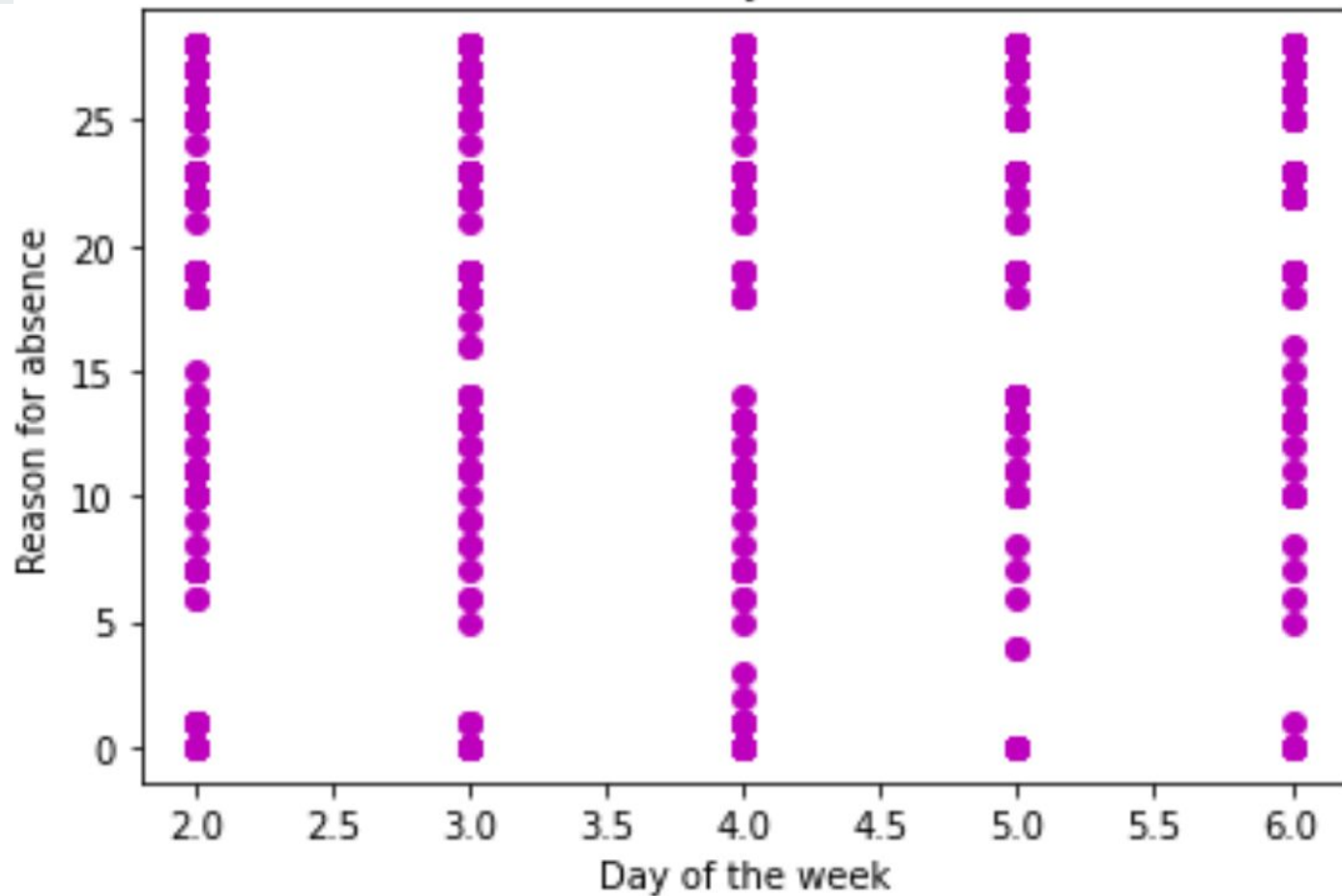
Now, let's take a look at the days of the week. One may assume that an employee is more likely to be absent on a Friday or a Monday. Giving themselves a longer weekend, or recovering from a weekend that was too strong.

Let's look at the data and see if it supports that assumption.

According to statistical method **spearmanr** there is no such correlation.

(correlation=0.12246263308006688, pvalue=0.0008429727110657136)

Correlations of Weekdays & Absentee Reasons



This scatter plot displays that the correlation in workplace absenteeism does not significantly increase or decrease because of the weekday.



Looking Further

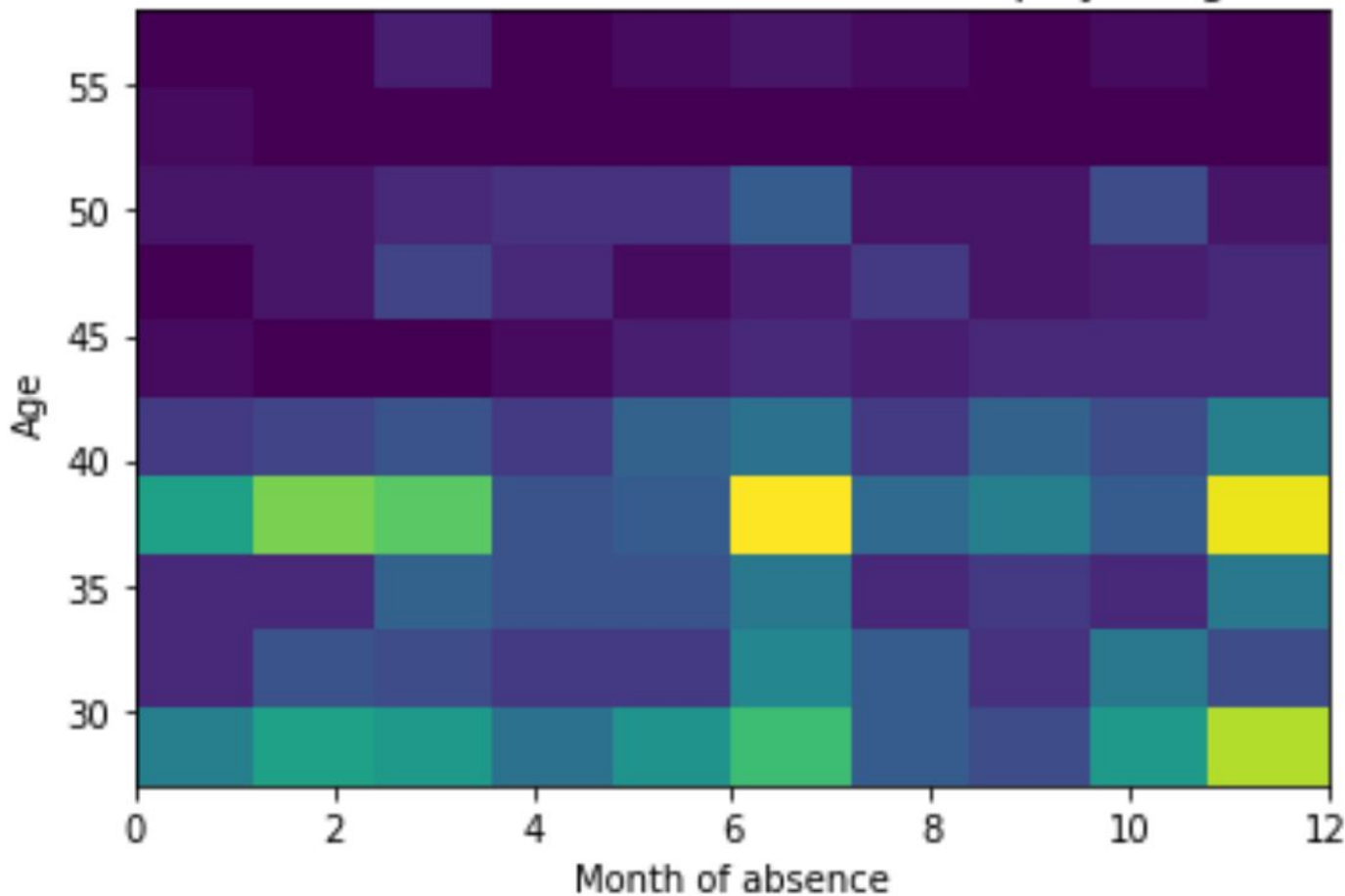
What about the different months? Does the time of the year play a role in absenteeism in the workplace? Maybe employees want to party in the summer or enjoy the holidays? And does employee age play a role?

According to statistical method **spearmanr** this is in fact a slight correlation.

```
correlation=0.0016805552597149393, pvalue=0.9635981476773132
```

Let's take a closer look!

Correlation of Absentee Months & Employee Age



This 2D histogram heat map displays that workplace absenteeism does significantly increase during the summer and winter holiday months amongst employees younger than 43 years old.



In conclusion

In conclusion, employers can plan for productivity to in pet owners to decrease. Additionally, employee absenteeism will likely rise amongst younger employees during the winter holidays and summer months.

Explore some ideas with your team. Shorter work week during the summer? Bring your pet to work day? Perhaps, addressing these concerns head on could help.

Planning for and preparing for these challenges will ensure that productivity will be affected less.