Excel Linear Regression Activity.

This exercise will help you to use Excel to create a simple Linear Regression using a scatter plot. If you don’t have a version of Excel, then feel free to sign up for a free trial of Microsoft 365 here: <https://www.microsoft.com/en-gb/microsoft-365/try>

1. Open Microsoft Excel and use the HousePrices.csv file. You can also use your own file if you wish.
2. Select the data that you want to include in your linear regression. This should include the independent variable (x-values) in one column and the dependent variable (y-values) in another column.
3. Click the "Insert" tab and then click the "Scatter" button in the "Charts" group.
4. In the "Insert Chart" window, select the "Scatter" option and then click the "OK" button.
5. Excel will create a scatter plot of your data. Right-click on the plot and select "Add Trendline" from the menu.
6. In the "Format Trendline" window, select the "Linear" option under "Trend/Regression Type" and then click the "Close" button.
7. Excel will add a linear trendline to the scatter plot, and the equation for the trendline will be displayed on the chart.
8. To view the coefficient of determination (R-squared) for the regression, click on the trendline and then click the "More Trendline Options" button.
9. In the "Format Trendline" window, check the box next to "Display R-squared value on chart" and then click the "Close" button. The R-squared value will be displayed on the chart.
10. To make predictions using the linear regression model, you can use the trendline equation to calculate the expected value for a given x-value.

For example, if the trendline equation is y = 2x + 1 and you want to predict the value for x=3, the predicted value for y would be 7 (2\*3 + 1 = 7).