Identifying patterns - Lesson overview

Learning objectives:

- Understand the concept of the line of best fit and its role in identifying trends and relationships between variables.

- Know how to use the equation of the line to make predictions and inform future decisions.

- Analyse the slope and y-intercept variables to assess the nature and strength of the relationship between variables.

- Evaluate correlation coefficients to determine the strength of the linear relationship between two variables.

- Interpret the R-squared value to evaluate the goodness of fit of the line of best fit and its representation of the data.

- Utilise scatter plots, conditional formatting, and heatmaps to visualise relationships between variables, identify patterns, and evaluate the line of best fit.

▶ Video
≣ Knowledge questions
📖 Slide deck
🗒 Reference card
⚙ Walk-through

Creating a line of best fit — 3 min
Interpret your line — 4 min
Dependent and independent variables — 4 min
Evaluating your line — 15 min, 5 min
The line of best fit equation — 5 min, 5 min
Correlation and R-squared — 5 min
The line of best fit — 5 min, 5 min
Heatmaps — 5 min

Description

To ensure we can effectively **identify data patterns**, we need to understand the **underlying concepts and techniques**. This understanding helps us to **identify trends**, **establish relationships**, and **make data-driven decisions**. In this lesson, we'll explore the **line of best fit**, **correlation coefficients**, **R-squared values**, and **heatmaps**. By the end of this lesson, we will be able to use these tools to **interpret relationships**, **identify data patterns**, and **make predictions**.