

# Problem statements

Your newly-formed Data Science team has been called in to solve a business problem. Your task is to devise a precise, step-by-step plan for how your team will use the company's data resources.

Read the three scenarios and pick **one** problem to work on.

Think carefully about:

- Any outstanding issues
- Any simplifying assumptions you might want to make
- The data you might use
- How your solution would be operationalised
- How you would quantify the impact of your solution

## **1 Fāxiàn**

Fāxiàn is a famous Chinese web search engine. They manage a large network of websites monetised using their own ads platform.

They're finding that most users don't seem interested in (i.e. don't click on) the ads they're shown. Because of this, their revenue and market share dropped significantly over the last few years. Can you help them improve the relevance of the ads they serve?

## **2 Fonìa**

Fonìa is one of the largest telcos in Western Europe. They operate a pan-European mobile network serving six different countries.

They're having major problems with customer retention: over 20% of their customers leave when their contracts expire. They've allocated a substantial part of their marketing budget to prevent customers switching away. Can you provide them with a solution?

## **3 Foodie's**

Foodie's is a busy online shop that specialises in gourmet food. They carry over 5,000 different products across many categories.

They're struggling to highlight the breadth of their offerings to existing customers. They've tried to generate interest with 'picks of the month' newsletters, but have found that these don't always provide a good ROI. Can you help them improve the visibility of their products?