

Problem statement

Gemsi is one of the largest telecommunications firms in Europe.

They are having major problems with customer retention in their wireless business: in the United Kingdom alone, over 20% of mobile customers leave when their contracts expire, and it is becoming increasingly difficult to acquire new customers.

Since the market is saturated, telecommunications companies are now engaged in battles to attract each other's customers while retaining their own. Customers switching from one company to another is called *churn*, and it is expensive all around: one company must spend on incentives to attract a customer, while another company loses revenue when the customer departs.

Attracting new customers is much more expensive than retaining existing ones, so a substantial part of the marketing budget is allocated to prevent churn.

You have been called in to help understand the problem and to come up with a solution. Marketing has already designed a special retention offer. Your task is to devise a precise, step-by-step plan for how the Data Science team should use Gemsi's vast data resources to decide which customers should be offered the special retention deal prior to the expiration of their contracts.

Think carefully about outstanding problems and any simplifying assumptions you might make, as well as about the data you might use, and how they would be used.