

Conversion Rate Challenge

Introduction

In online businesses, a common application of data science is to analyse the customers visiting your website in order to optimise the processes driving conversion.

Challenge

You work for an online retailer and your Head of Ecommerce wants to improve conversion rates across the website. She asks you a number of questions to help guide the work:

- What are the current conversion rates by source?
- Is it possible to predict whether a customer is going to make a purchase?
- What are the most important factors driving conversion?
- What should we do next?

Data

You have one table of data, as detailed below:

Columns:

- country – the location of the user
- age – the age of the user
- new_user – whether customer has visited the site before
- source – the channel bringing the customer to the site
- total_pages_visited – how many unique pages the user visited during visit
- converted – whether the user made a purchase

Additional Information

- You should be aiming to answer all the questions within a couple of hours
- Code should be written in R, Python or SQL
- Your output will be evaluated on the following criteria:
 - Correctness – does your code produce the correct output?
 - Code quality – is your code executable, well documented, well structured?
 - Efficiency – is your code performant and concise?
 - Technology – are tools and techniques used correctly?

- Communication – are your answers clearly presented and understandable?
- The test data set is comprised entirely of mock data; however, please do not share the test.
- Good luck, and have fun!