Marketing Analytics Challenge

# Questions

1. Executives are interested in the repeat purchase behavior of company X’s users. Calculate repeat rate based on the data provided, using the best methodology you deem fit. ​**Please summarize your methodology and results.**
2. The company’s core product, ecommerce point-of-sale installment loans, grows through a combination of signing merchants, attracting users, engaging users and driving profitable loan volume. Based on the data provided on our existing funnel, loan performance, merchants, and marketing engagement, how do you think we should further grow and improve our business?
   1. **Please prepare a presentation sharing 2-3 recommendations and how you would prioritize them. Please restrict your presentation to a maximum of 5 slides, not including cover or appendix.**
3. **After exploring the data, please define at least two questions you would be interested in exploring on 1-2 slides in the appendix of your presentation.** ​At a minimum, describe:
   1. What additional data would you need to explore the question?

# Data Overview

***funnel.csv*** ​Data on the funnel of company X’s core checkout product. Each row corresponds to a checkout start. A checkout starts when a user selects company X’ as the payment option in a merchant checkout. Assuming the user proceeds through authentication and is approved, the checkout ends when the user selects and confirms the terms of the loan.

* ​**checkout\_id**​: unique identifier for the checkout
* ​**checkout\_date**​: date and time when the checkout was initiated
* ​**merchant\_id**​: unique identifier for the merchant (links to merchant.csv)
* ​**user\_id**​: unique identifier for the user
* ​**application**​: binary flag indicating if the user submitted an application
* ​**approved**​: binary flag indicating if the user is approved
* ​**confirmed**​: binary flag indicating if the user confirmed the loan and completed checkout

***loan.csv*** ​ Each loan will tie to a unique confirmed checkout.

* ​**checkout\_id**​: unique identifier for the checkout associated with this loan (links to funnel.csv)
* ​**checkout\_date:** ​date of the checkout associated with this loan
* ​**merchant\_id**​: unique identifier for the merchant (links to merchant.csv)
* ​**user\_id**​: unique identifier for the user (links to funnel.csv)
* ​**loan\_amount**​: total amount of the loan
* ​**loan\_length**​: length of the loan in months
* ​**fico\_tranche**​: a measure of the user’s creditworthiness from his/her FICO
* ​**loan\_return**​: profit ($) to company X from the loan

***merchant.csv*** ​Data on each merchant that integrates company X's core checkout product.

* ​**merchant\_id**​: unique identifier for the merchant
* ​**name**​: name of the merchant
* ​**industry**​: industry of the merchant
* ​**tos**​: the merchant’s estimated annual total online sales

***marketing.csv*** ​Data on each user’s latest engagement date with a marketing channel.

* ​**user\_id**​: unique identifier for the user (links to loan.csv)
* ​**date:** ​date and time when the last marketing engagement was made
* ​**last\_touch\_marketing\_channel:** ​the name of the marketing channel where the last engagement was made