

## INTRODUCTION

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Welcome to VinID Data Science/Analytics Recruit Challenge!

In this challenge, you are going to help Rainbow Store understand and predict customer behaviours. Attached with this challenge is the store's basket-level transaction data. The store manager wants to know which customers are likely to purchase next month so he can prepare his marketing campaign. He expects the final output of your work as follows:

1. A maximum 2-A4-page document (or 10-page slide) presenting your:
  - a. Problem Understanding
  - b. Methodology/Approach
  - c. Workflow
  - d. Answer on Discussion Problem
2. Your code base using any programming language of choice (preferably Python/R) via Github/Gitlab/Bitbucket or compressed file so other scientists can replicate your work.

Please contact Mr. Khanh: [v.khanhnh3@vinid.net](mailto:v.khanhnh3@vinid.net) for any further questions.

Good luck,  
VinID Analytics Team.

## DATASET

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Transactions over a 5-month time period

Fields:

customer serial number (csn)

date

transaction\_info containing list of items purchased (json format)

article

salesquantity

price (per unit)

## TASKS

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### 1) Model Engineering (3.5 hours)

Implement a model that predicts which customers make a purchase in month 3. Use data from months 1 and 2 as features.

### 2) Discussion Problem (30 minutes)

You're asked which customers to send promotional e-mails to next month, based on your model. What is your recommendation? What problems do you see in applying the model in this way?

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