

DN SC 6290 Customer Analytics, Fall 2021

HW1

Customer Analytics Frameworks and Different Business Models

Instructor: Ali Pilehvar, Ph.D.



Due 9/16/2021

Homework for next week (due Thursday 9/16, 7pm EST)

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1) Identify 2 metrics for each stage of AARRR analytics framework for below companies [4 point]

- Groupon
- Dropbox

2) The Founder of Dropbox wants to calculate the rate at which the paying customer grow monthly for last 5 months. How do you calculate the *avg monthly growth rate*? [2 point]

| | Jan | Feb | Mar | Apr | May |
|---------------------|-----------|--------|--------|--------|--------|
| Paying users | | | | | |
| Starting with | 1,000,000 | ? | ? | ? | ? |
| Newly Acquired | 50,000 | 70,000 | 65,000 | 80,000 | 90,000 |
| Lost | 10,000 | 15,000 | 20,000 | 25,000 | 30,000 |

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3) In this [file](#), you will find the transactional data of around 100 customers in an auction e-commerce site like eBay. These customers were acquired at different points of time via different marketing channels. Each customer could bid and participate in some auctions and end up winning in a few. [4 point]

Questions to answer:

- If you need to invest more in ONE of these channels for customer acquisition, what would be your choice, and why?
- What % of bidders ended up winning in at least one auction?
- If the Gross Margin of the business is 20%, how much the e-commerce should pay to acquire a customer (CAC) at the maximum to make break even?

https://docs.google.com/spreadsheets/d/1eHdGRUb-190xvhG4YnDB9FCEkS_B0SjO-1chr7MI1lo/edit#gid=1051093160
