

Challenge 2: Program Evaluation

In this next challenge, you'll need to evaluate two different content delivery programs for a foreign language platform.

A simple way to think about program evaluation problems is to approach them as A/B tests. You can treat one as the control and the other as the test program.

Background

When you're evaluating programs, it's important to first determine the key metric for the problem. Is your goal to increase test scores, user engagement, or some other KPI?

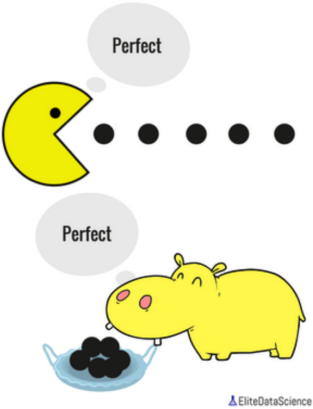
For this challenge, our goal will be to maximize user engagement.

In general, all online learning platforms must figure out how to keep users engaged. Users may have all sorts of other responsibilities and distractions that pull them away.

One lever that platforms can pull is whether to "drip" lessons or unlock everything at once.

- **Drip** programming, e.g. unlocking a new module every week, prevents users from feeling overwhelmed or burnt out. This strategy is usually more effective for progression-based courses with a clear start and end.
- **Binge** programming, e.g. unlocking everything from the start, permits users to learn as fast as they want. This strategy is usually more effective for buffet-style courses.

Both programs have their advantages and disadvantages.



Pacman vs. Hungry Hippos

Data

We have two tables.

The first is called **engagement.csv**.

	user_id	browser	program	hrs_per_week
0	769245	IE	binge	4.91
1	21650570	Safari	binge	3.97
2	91760162	Chrome	drip	3.55
3	90748752	Chrome	drip	5.46
4	66876824	Chrome	binge	3.87

Data Dictionary:

- **user_id** - Unique user ID.
- **browser** - User's browser.
- **program** - Course delivery program.
- **hrs_per_week** - Average hours per week spent on platform.

The second is called **users.csv**.

	user_id	registration	country
0	90482091	2015-11-01	Germany
1	41529564	2015-11-01	Germany
2	47570654	2015-11-01	Germany
3	96119909	2015-10-31	Germany
4	57248612	2015-10-29	France

Data Dictionary:

- **user_id** - Unique user ID.
- **registration** - User registration date.
- **country** - User's country of origin.

Objectives

Should the language platform roll out a drip program or a binge program?

- Which program has higher user engagement?
- If you take different segments of the data, does the relationship still hold?
- Provide actionable insights to the business.