Reordering minigames with personalized Recommendation System
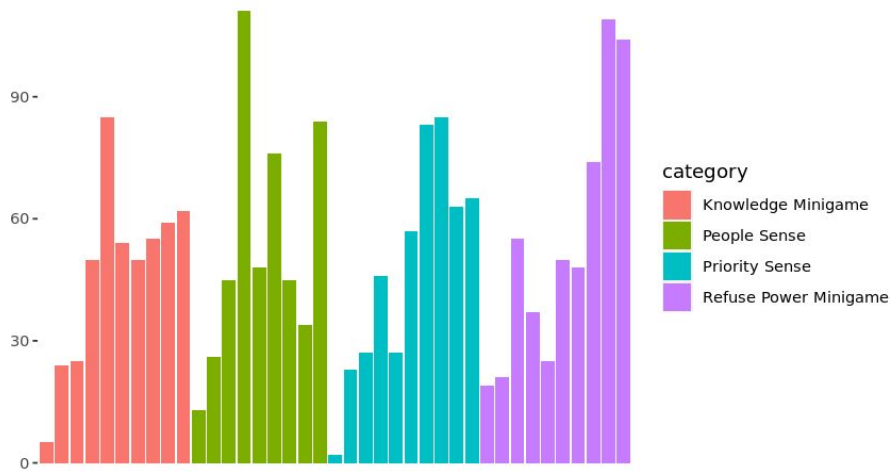
1.   **Background & Problem**

2.   **Methodology**

3.   **Evaluation**

Team Chill Chill

Background & Problem

number of unexplored minigames for 166 participants

category
- Knowledge Minigame
- People Sense
- Priority Sense
- Refuse Power Minigame

- **10-16** hours to finish the game!

- **24%** finished all

- Quit rate increases with the game progress

Problem:

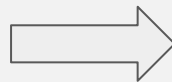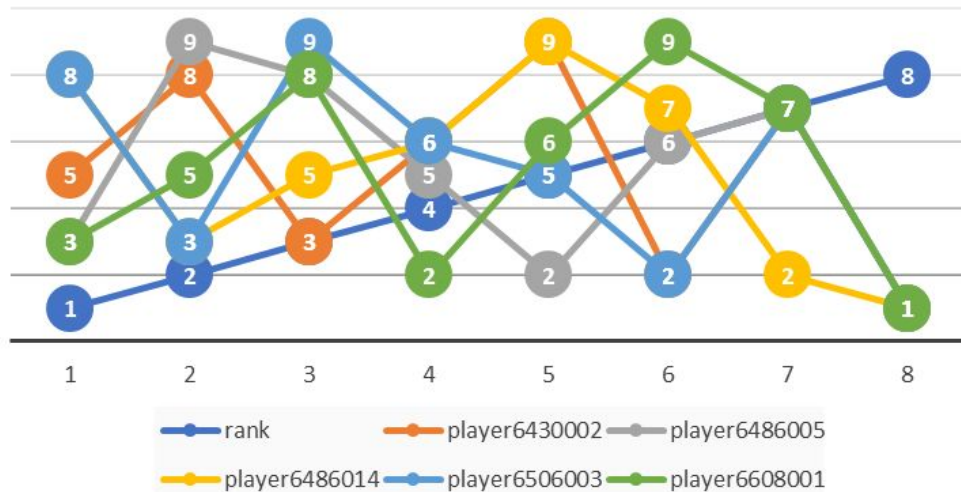The inefficiency of game process causes incomplete data collection

What we want to do:

Reorder minigames personality → Push most challenging minimages to players at the early stage → Maximize data collection efficiency for researchers

$$Struggle\ Level = 3 - \frac{Total\ score\ of\ each\ minigame}{\#\ Attempts\ of\ each\ minigame}$$

Previous behaviour database (take repository)

Recommender System

Educational minigames with highest S_i score

Feedback

C j+1

C j+2

C j+3

S_{i1}

S_{ij}

New Player i

Challenge 1

......

Challenge j

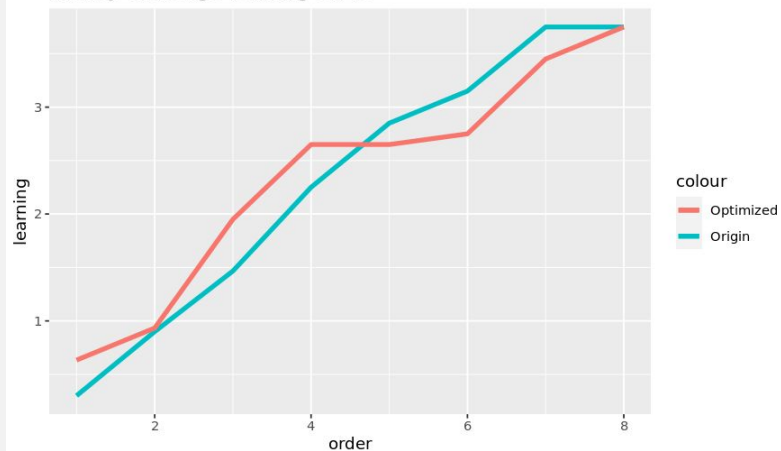# 3 Evaluation

Steeper Learning curve:
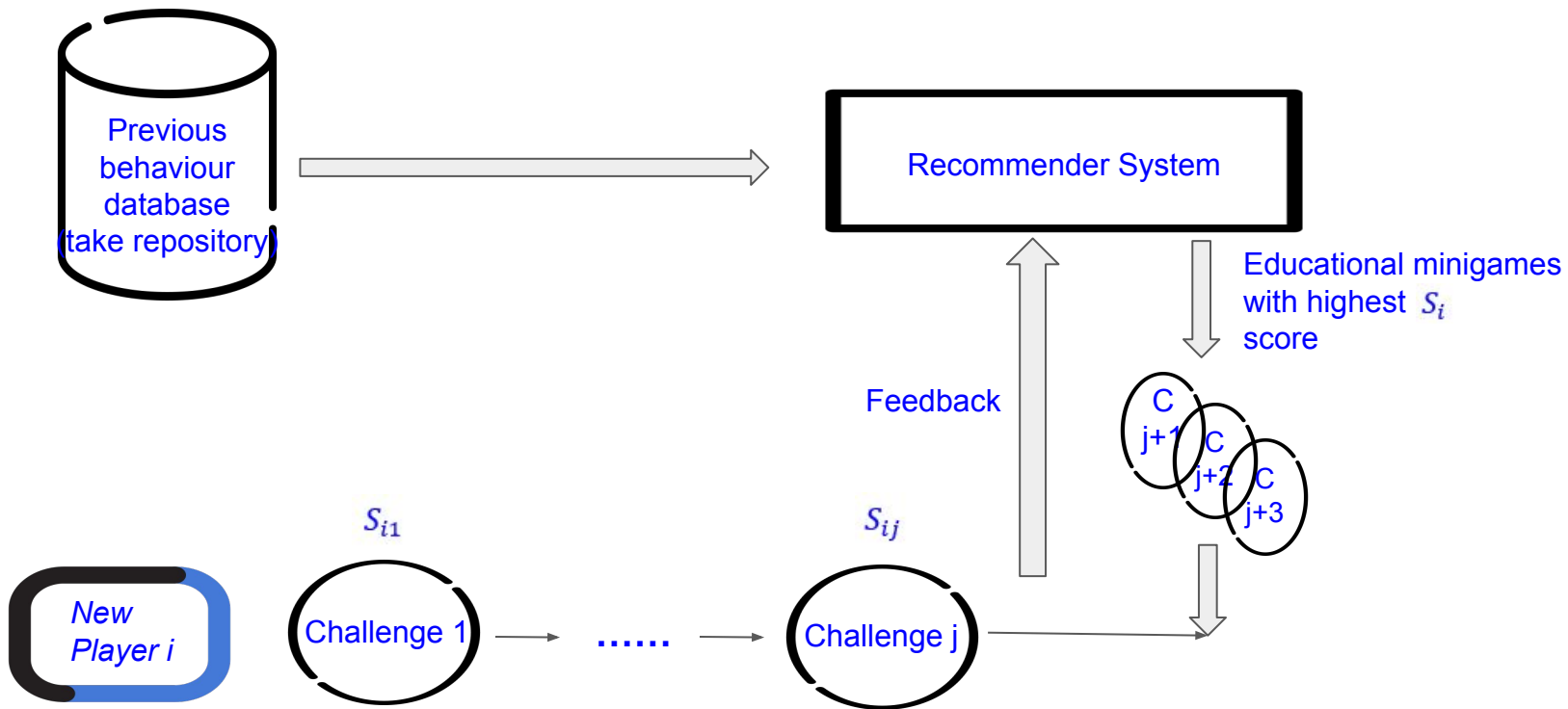
Personalization:

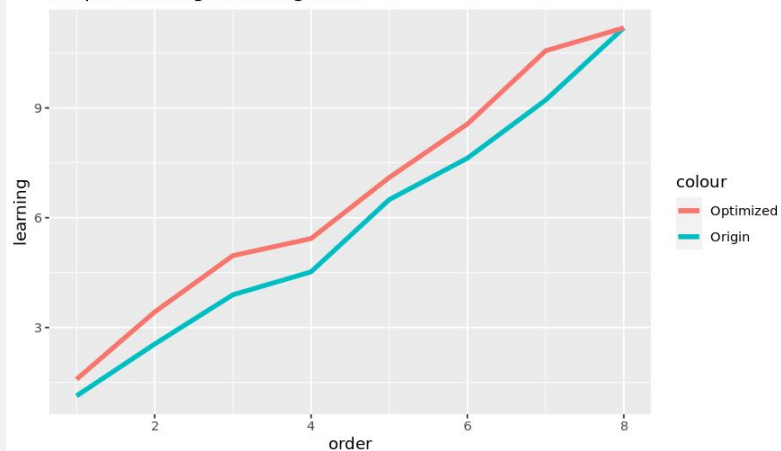Optimized Minigage Order (Priority Challenge)

Using our model, the learning performance for People sense increased by 12.2% an average than the original performance
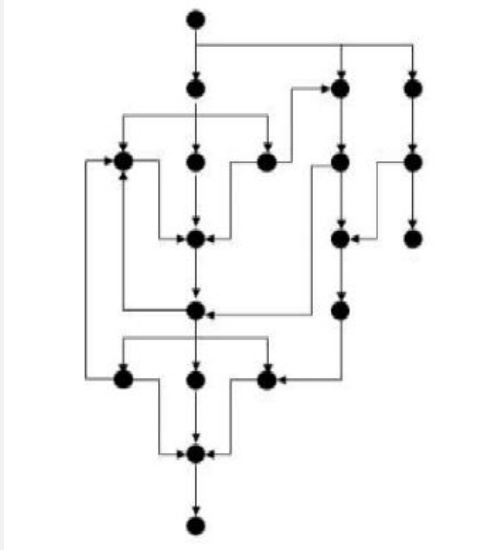

Priority challenge learning curve

People challenge learning curve

Fixed order of minigames

Personalized order of minigames