Reordering minigames with personalized Recommendation System

1. Background & Problem
2. Methodology
3. Evaluation

Team Chill Chill
Background & Problem

- **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
Methodology

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

Previous behaviour database (take repository) → Recommender System

New Player i → Challenge 1 → …… → Challenge j

Cj+1 Cj+2 Cj+3

Educational minigames with highest score \( S_i \)

Feedback

\( S_{i1} \) \( S_{ij} \)
Using our model, the learning performance for People sense increased by 12.2% on average than the original performance.
Appendix

Fixed order of minigames

Personalized order of minigames