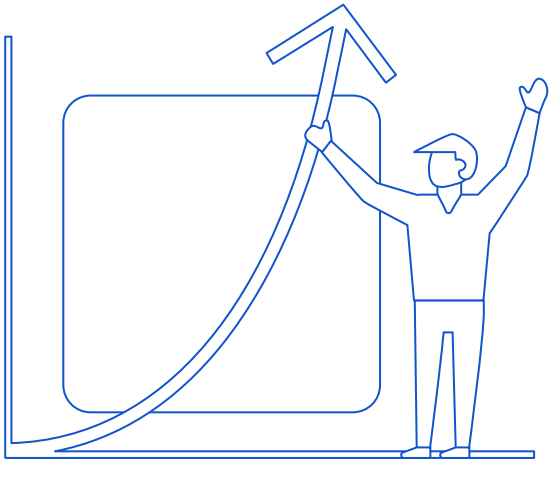
Inefficiency in Game Design

Data Analysis of Game Log File



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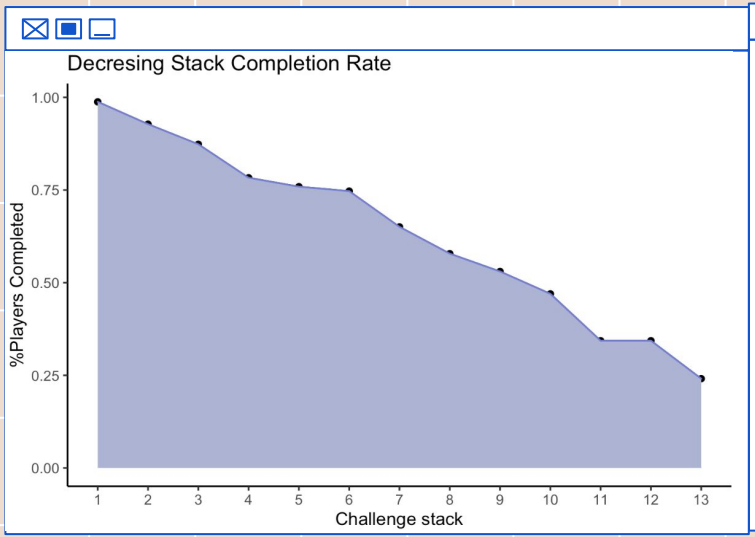
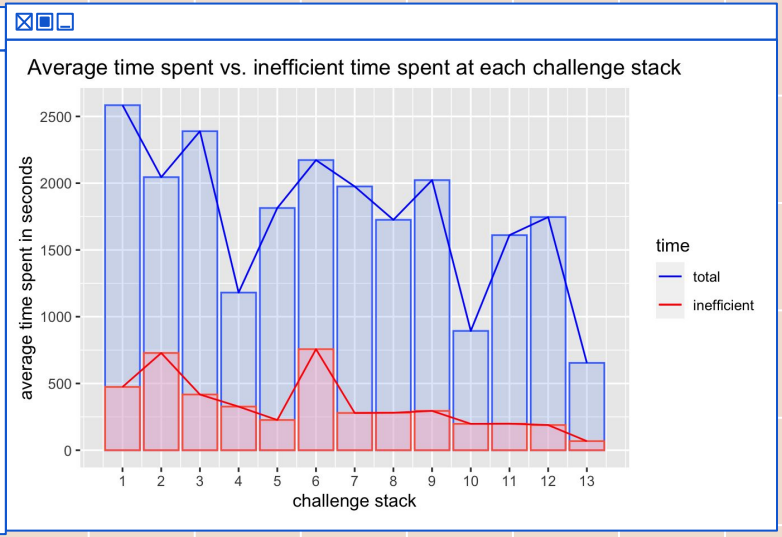
Observation: Less than 25% players completed the game

Problem Dissection

"Stack challenge" part: Excess unmeaningful clicking has masked the real learning

Mini-game part: Over-repetition of identical gaming further decreased user experience





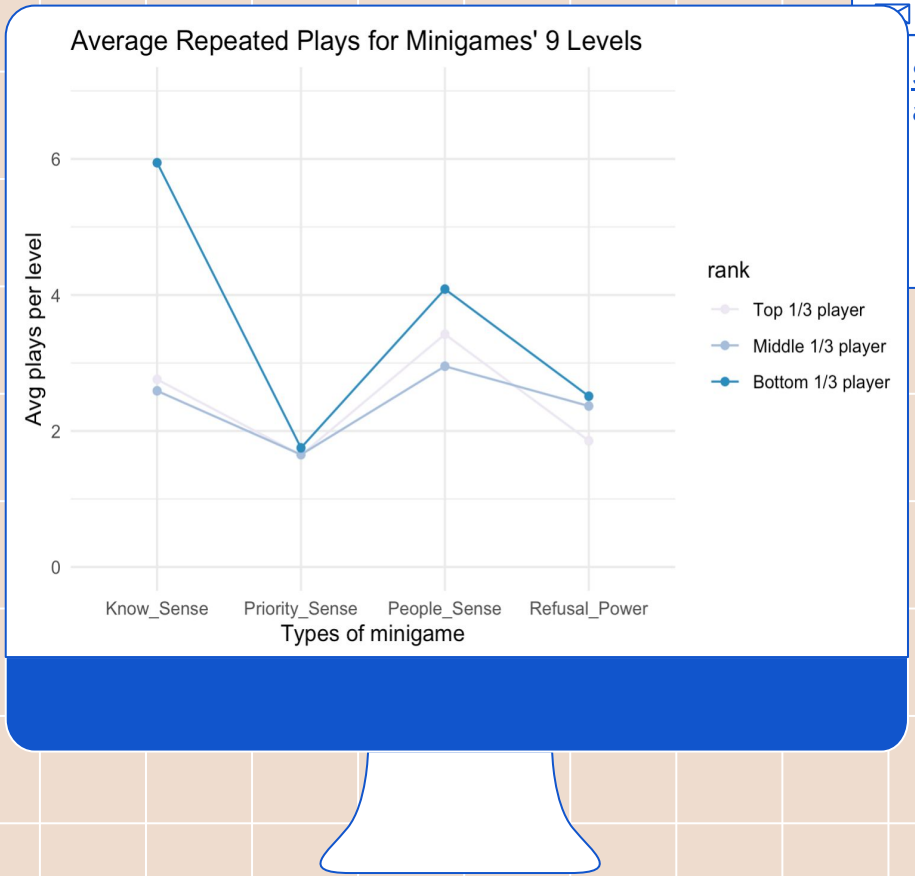
Evidence

"Inefficient" actions captured in Game Log

- Repetitive clickings on decision panel, scene info, and key point panels
- Laborious scene scanning and lengthy animations
- Aimless actions had spikes at stack 2 and 6
- Players not always receive designer's hints, suggesting a necessary revision of game interface and difficulty level at certain stacks

The game should deliver the intended messages in an efficient manner. The current design features a low return of time investment for players.

MiniGames:Significantly higher reruns failed to retain bottom 1/3 players



Significant differentiation in gaming experience among players concentrated on:

- *Know Sense & Priority Sense* for the plot of means
- *Know Sense & Priority* Sense for ANOVA (mean adjusted by controlling player ranks)

Effect	F-Stats	P-Value	Significance
rank	9.600	1.14e-04	*
minigame	34.881	6.47e-15	*
Interaction	8.691	7.42e-07	*

Actions to retry mini games could be due to:

- Qualification to proceed the game
- Discrepancies among types of minigames in difficulty level