

# DF 2022: Goodbye

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## Presented By

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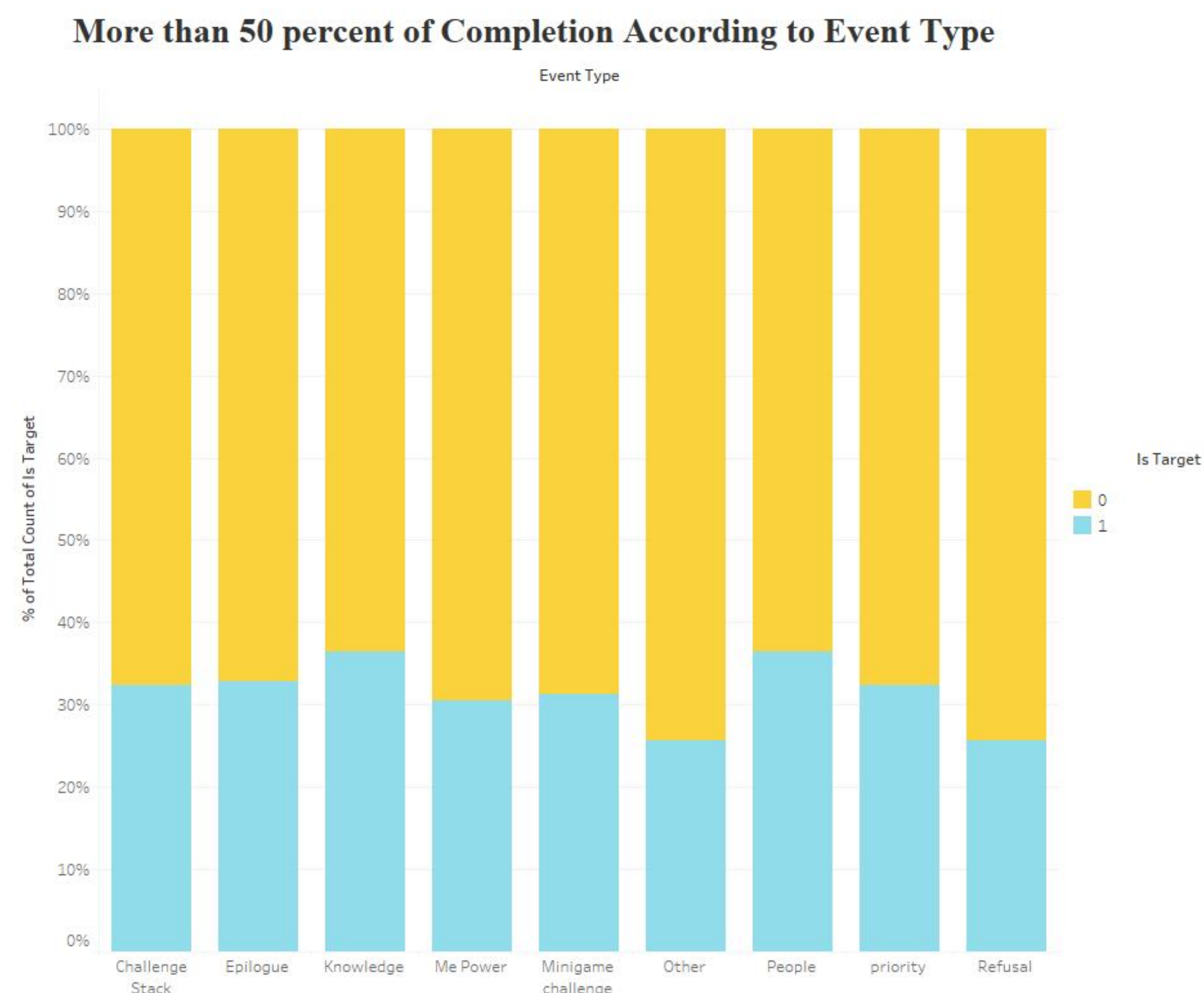
Yoonseok Oh



# DF 2022 Goodbye's Research Question:

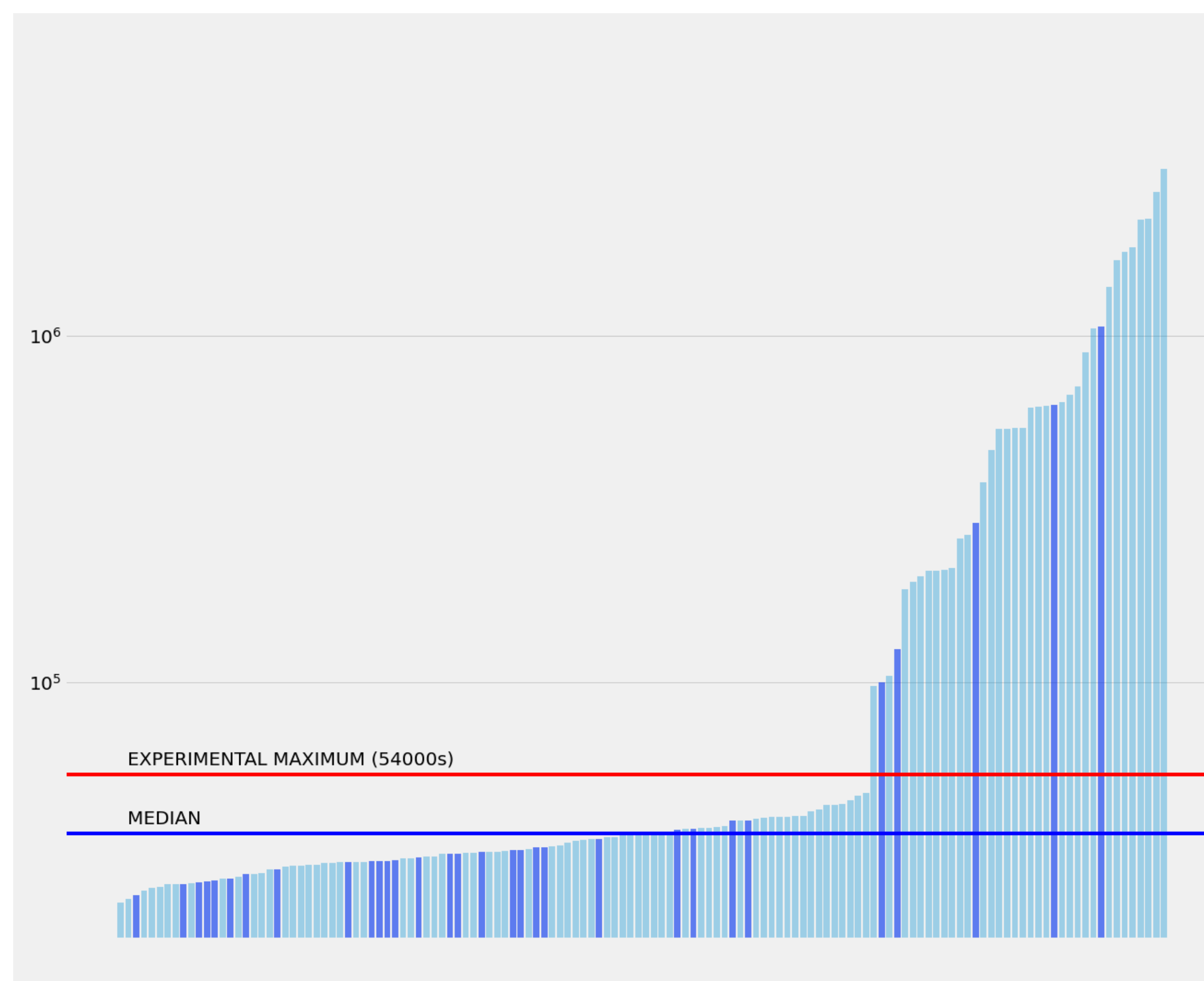
## What are the students' characteristics who completed more than 50 percent of game process?

### Part 1: Related to Event Type



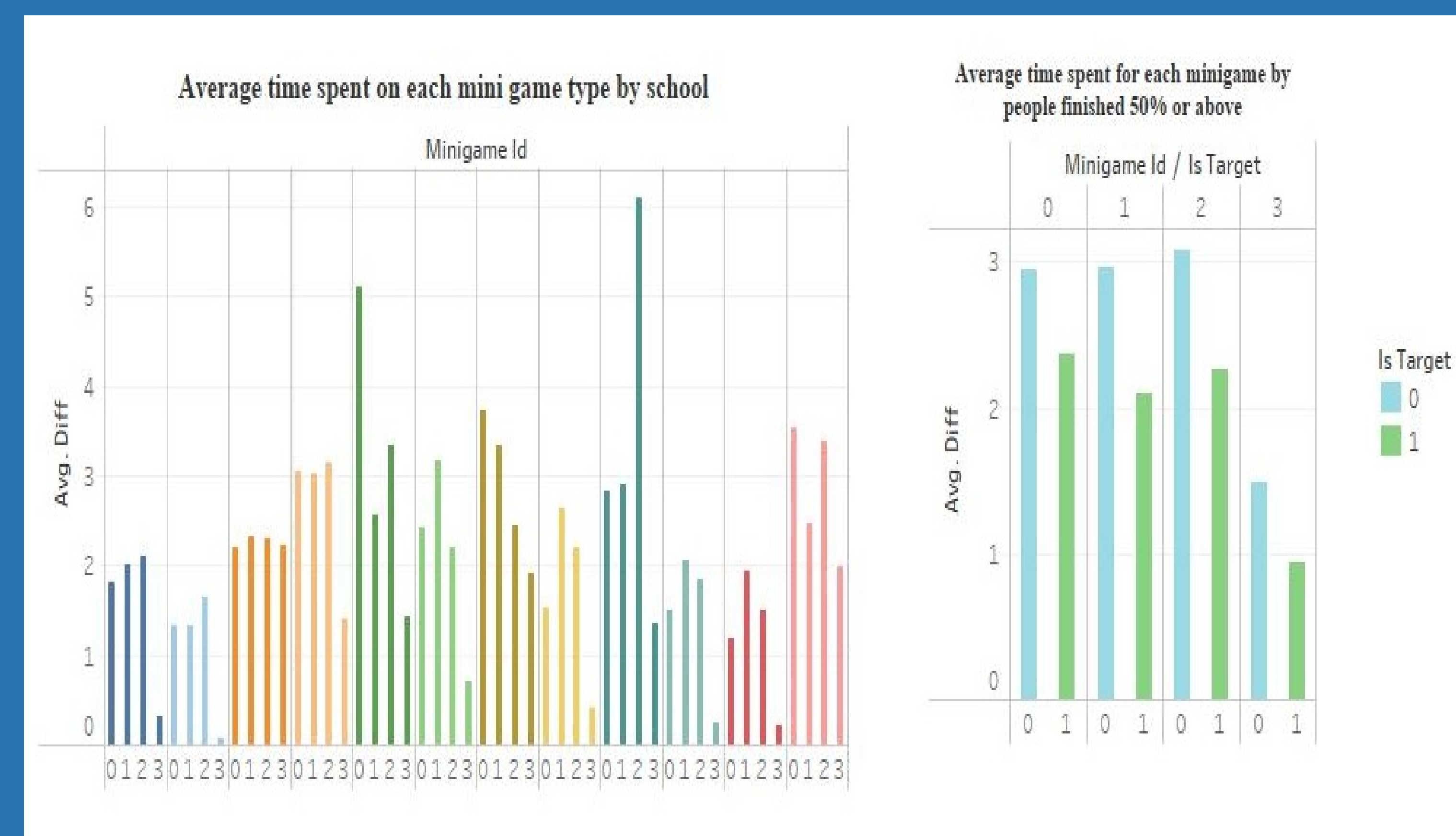
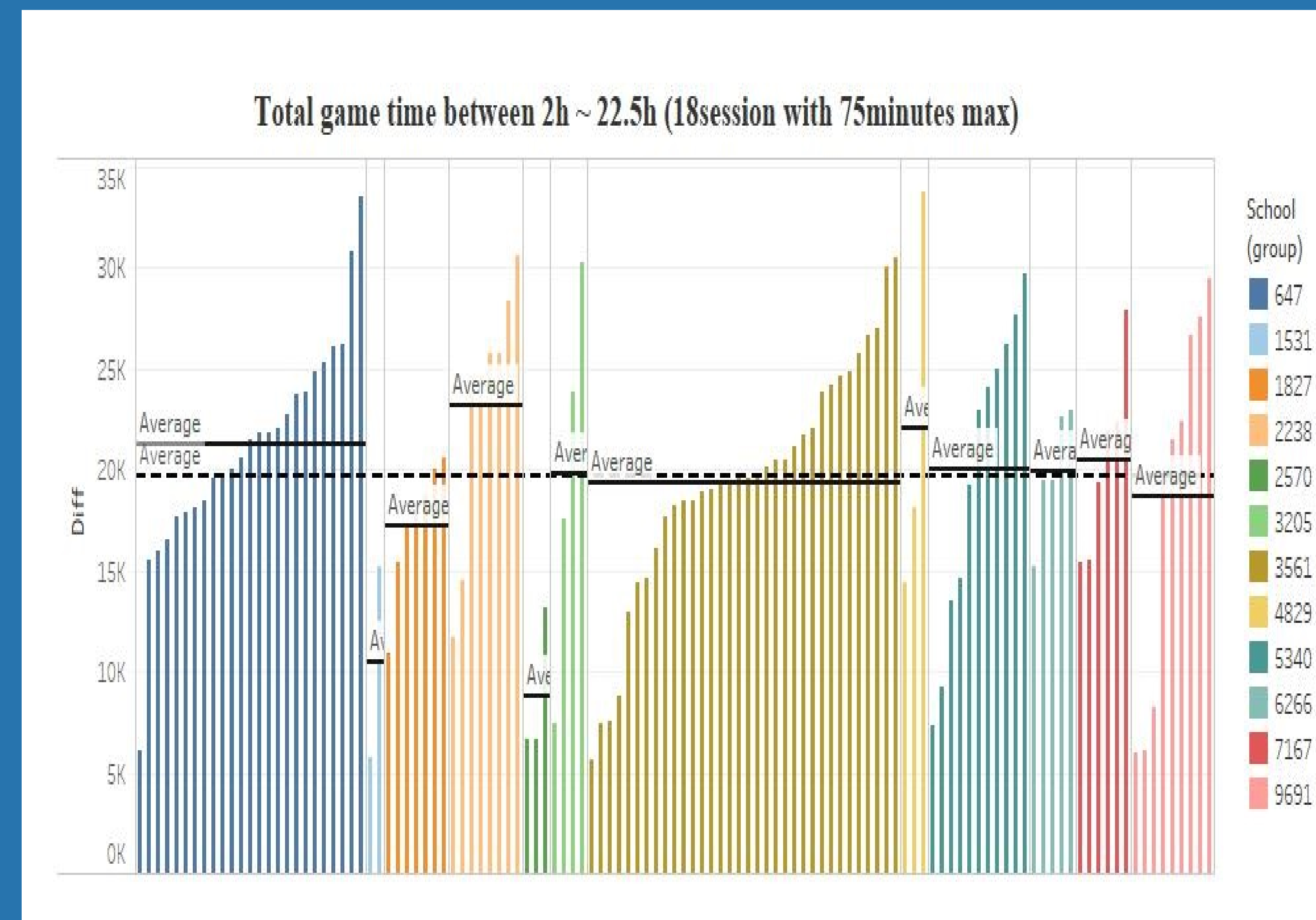
Among 8 event types, "Other" and "Refusal" types tended to more complete the game more than 50 percent.

### Part 2: Related to First Stage Completion



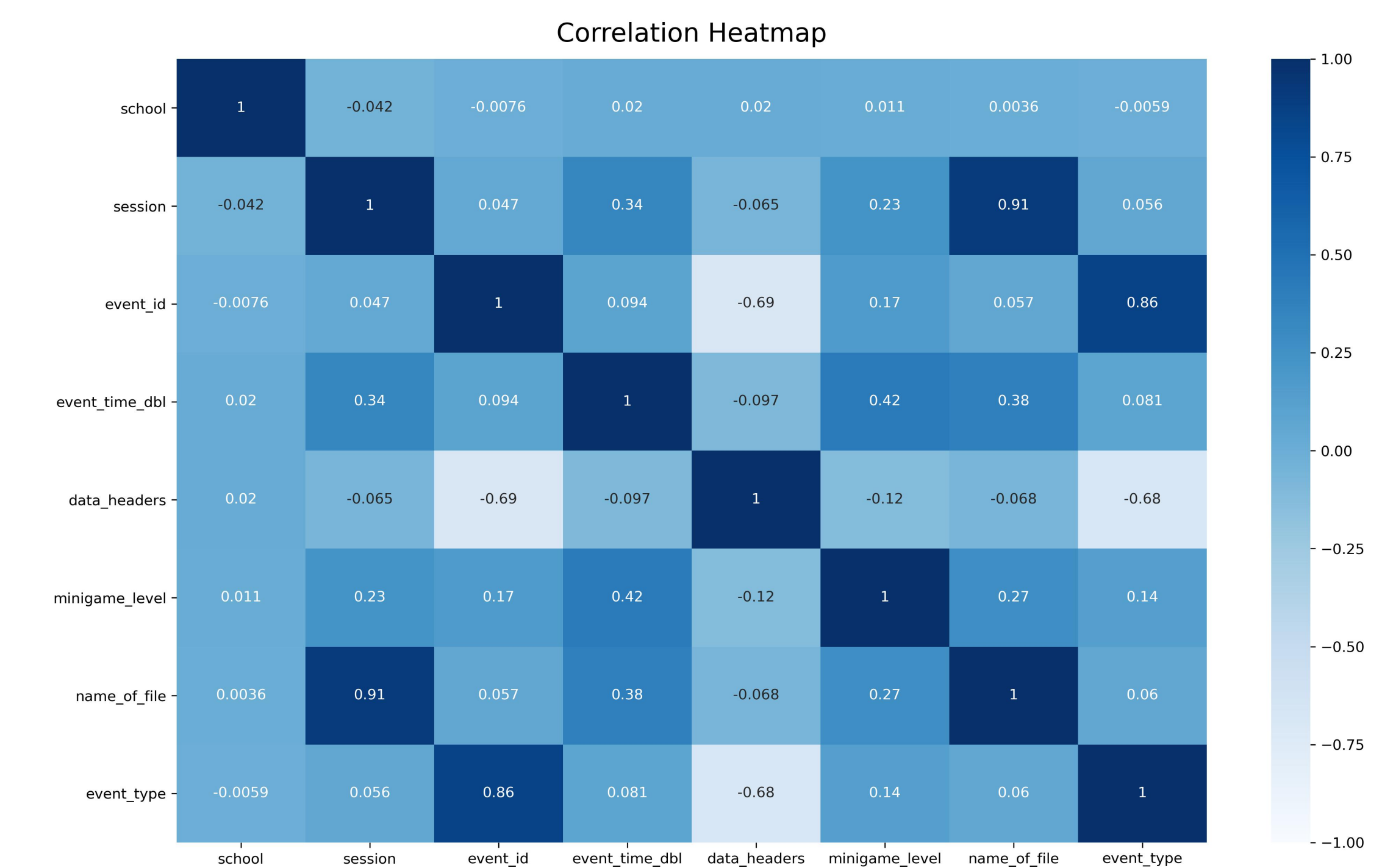
Log distribution of student time spent on finishing the game, with students finished the game denoted as the deep blue.

### Part 4: Additional Data Visualizations



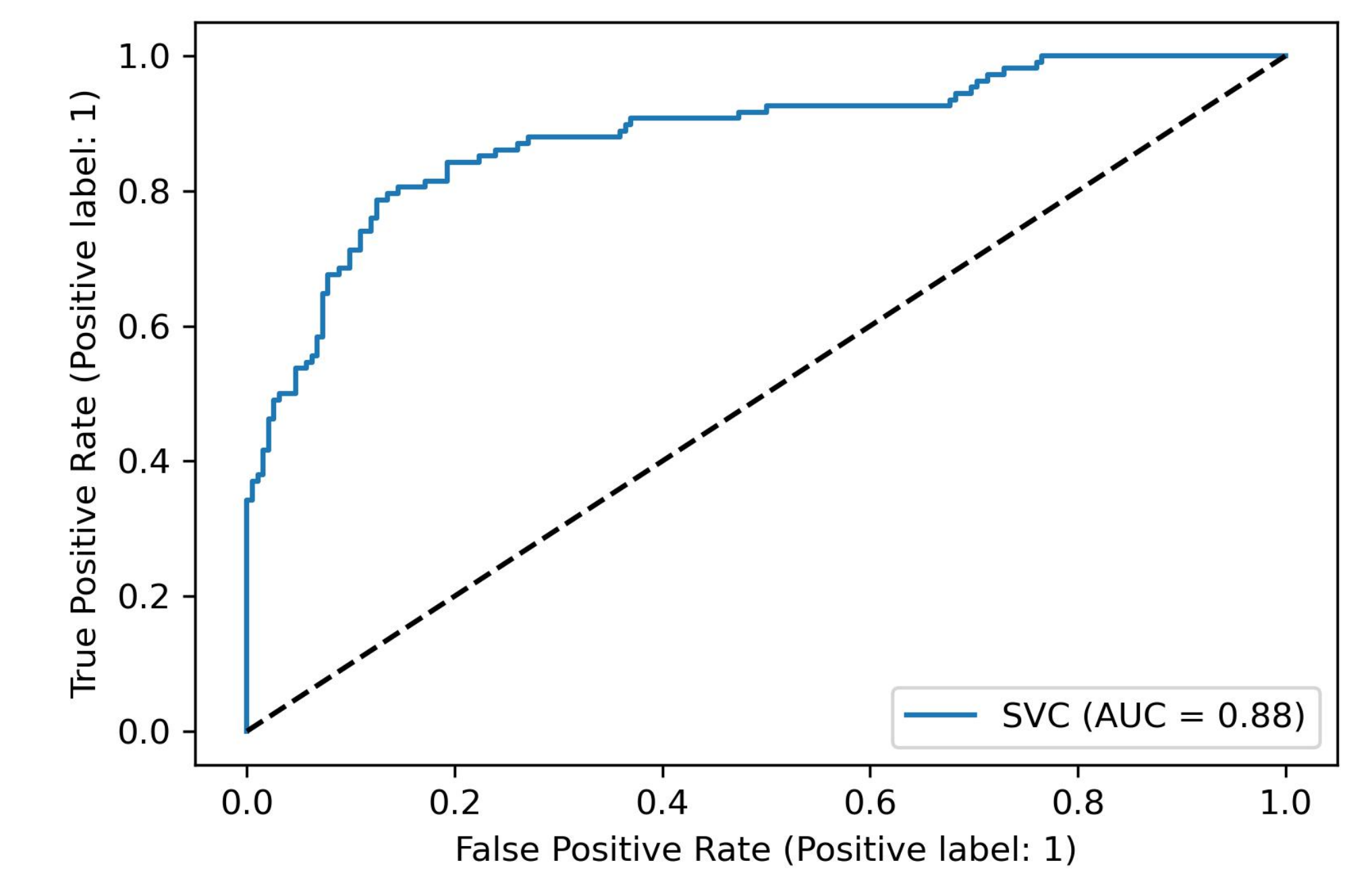
### Part3: Model Selection

Correlation Plot



A heat map provides an immediate visual summary of information. Our preprocessing data have some strong correlations.

ROC Curve



SVC (support vector classification) classifier gives 88% model accuracy using hyper-parameter kernel and probability tuning.



# Limitation & Conclusion

- Problems in the data due to:
  - 1) Lots of technical errors occurred during data collections and analysis such as 'event\_time' variable.
  - 2) Multiple data collection was stopped when the consent was withdrawn.
- 88% accuracy ROC curve result based on SVC classification. Students who are more likely to finish the game show better cognitive activity. Further researches needed to investigate with more granular level of attributes within interactions in minigames.