

## Developing a new type of recommendation system based on interdisciplinary research in the gaming area

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### 【研究の目的と内容】

The core objective of this project is to gain a deeper understanding of users' underlying motivations and values in game-playing contexts and to apply these insights to improve recommendation accuracy. During this research period, particular emphasis was placed on qualitative methods, including in-depth interviews and user behavior analysis. The primary focus was the development of an AI-driven automated interview system, through which significant research progress was achieved.

In addition, the project examined a variety of game genres and contexts, including puzzle games such as Tetris, FPS games such as Valorant, Mahjong, and Texas Hold'em poker. These investigations were conducted to capture a broad range of play styles, emotional responses, and motivational factors. The research also incorporated generative AI tools, such as GPT-5.4-based systems, as both interviewers and synthetic participants in methodological experiments, with the aim of evaluating the feasibility and effectiveness of AI-assisted qualitative data collection

### 【研究の成果(本研究によって得られた知見、成果、論文、学会発表、外部資金への応募見込み等)】

*During this research period, four undergraduate students and one master's student successfully completed their theses under my supervision. Each thesis addressed a distinct topic related to the development and future applications of the EVBR system.*

- (1)The first undergraduate thesis focused on Tetris and investigated how different background music (BGM) conditions affect players' gameplay performance.
- (2)The second thesis examined Texas Hold'em poker, focusing on how players' moods and emotional states during gameplay may influence their winning probability and decision-making order.
- (3)The third thesis explored Valorant, a tactical shooting game, and analyzed how different crosshair designs and colors affect gameplay performance among players with different skill levels.
- (4)The fourth thesis focused on Mahjong and investigated whether systematic training in tile-discarding strategies and logical reasoning could improve participants' verbalization ability over time.

In addition, my master's student completed a thesis on the development of an MEC-based automated interview system using a large language model (AI). This work was successfully accepted and published at an international conference.