

# ECHOES OF CLUES

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## BASE ABSTRACT:

### Game Concept:

"Echoes of Clues" is an engaging mystery puzzle game where players assume the role of a detective, unraveling intricate crime scenes through word puzzles. The game uniquely blends storytelling with adaptive gameplay to create an immersive detective experience.

### Companion Selection:

Players choose a crime assistant whose skills impact the quality of clues provided. Compatibility between the detective and assistant is assessed based on a percentage metric, determining which assistant's abilities are selected. This ensures that the clues are tailored to enhance the player's investigative experience.

### Game Mechanics and Algorithms:

**Word Puzzles:** The core gameplay involves solving word puzzles to gather evidence and uncover the criminal.

**Machine Learning Algorithms:** The game employs various machine learning algorithms, including Support Vector Machines (SVM) and Reinforcement Learning (RL), to handle different aspects of puzzle difficulty and gameplay dynamics.

**Large Language Models (LLM):** LLMs are used to dynamically generate hints and clues, ensuring a varied and responsive gameplay experience.

### AI Integration:

Good AI: Provides reliable and helpful clues, Bad AI: Offers misleading or unhelpful clues.

Players are unaware of the AI's quality until they encounter a dead end, revealing whether they trusted the good or bad AI. This mechanic adds an element of uncertainty and challenge, enhancing the gameplay experience.

### Adaptive Difficulty:

An Adaptive Difficulty Algorithm monitors player performance, adjusting puzzle complexity in real-time to maintain a balanced challenge and engaging gameplay.

### Conclusion:

"Echoes of Clues" offers a fresh take on the puzzle genre, combining adaptive difficulty, dynamic hint generation, and strategic companion selection to create an ever-evolving and immersive gaming experience.