Transform Yourself

AI-Driven Adaptive NPC Personalities in Video Games

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INTRODUCTION

- **NPC Limitations**: Traditional NPCs have fixed behaviors and give predictable responses.

- **Adaptive NPC Concept**: NPCs change and develop based on how the player interacts with them.

- **Objective**: To make gameplay more immersive and create unique, personalized experiences for each player.
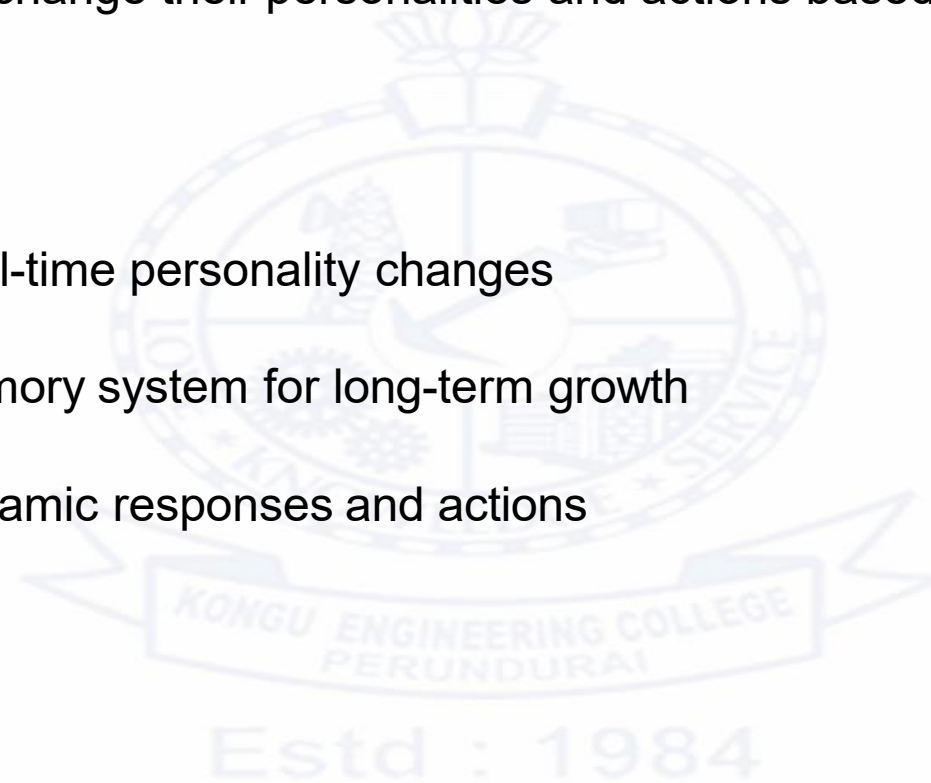
Concept Overview

- **Core Idea**: NPCs change their personalities and actions based on what the player does.

- **Components**:

       Real-time personality changes

       Memory system for long-term growth

       Dynamic responses and actions

Key Components of the System

- Player Interaction Tracking: Monitor player actions and behaviors.

- Adaptive Personality Model: Modify NPC traits (e.g., trust, loyalty). Behavior/Dialogue Adaptation: NPCs respond dynamically.

- Memory System: NPCs remember past player actions.

Player Interaction Tracking

Purpose: Track actions to build player profile.

Key Data: Dialogue choices, combat style, moral decisions.

Outcome: Personalizes NPC behavior based on the player's profile.

Benefits of NPC

- The benefits of adaptive NPCs include making the game feel more realistic, as NPCs seem alive and respond to the player.

- They also create personalized gameplay, giving each player a unique experience based on their choices, and make the game more engaging by offering new interactions on each playthrough.

- Additionally, they allow for creative storytelling by letting characters develop and change over time.

Chalanges and Solution

- Challenges include handling technical complexity and balancing memory use.

- Solutions involve using smart learning methods and improving memory efficiency.

- In the future, these methods could be expanded to work in large open-world games with many NPCs.
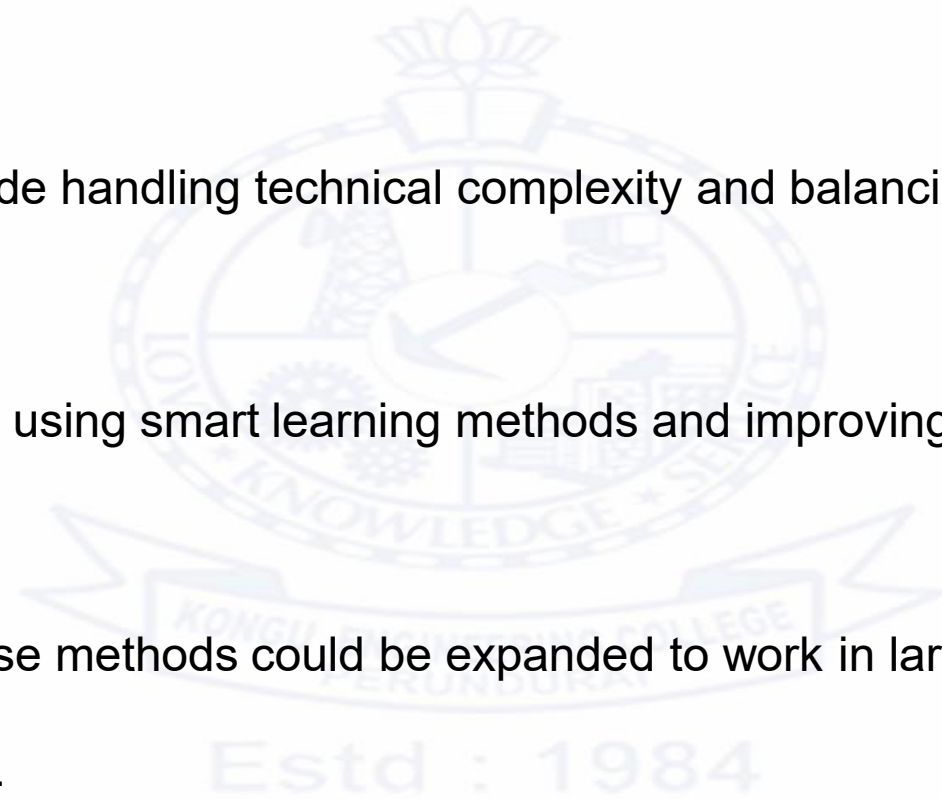
Example senario

- **Trusting Companion**: Becomes a loyal friend if the player helps them repeatedly.

- **Suspicious Merchant**: Increases prices if the player acts untrustworthy.

- **Rival Warrior**: Acts more competitive or respectful depending on how the player interacts with them.

Conclusion

AI-driven adaptive NPCs make games feel more immersive and improve the player experience.

In the future, they could set new standards for NPC behavior and interactions in gaming.

Thank you