AI Pet Companion System

An adaptive AI-driven virtual pet companion system where creatures evolve unique personalities and behaviors based on player interaction and care patterns.

Team:

Shanaya Malik, Matthew Streib, Trinity Wu, Luan Ta

Themes:
- **AI as an Adaptive Companion**
- **AI as a Dynamic Pet**

Novelty:
- **Multi-layered AI combining genetic evolution with learned behaviors**
- **Customizable creatures that develop distinct traits and responses based on player interactions**
- **Dynamic personality adaptation with meaningful consequences if needs are not met**

Value:
- **Players wanting virtual animal companions**
- **Game developers looking to create engaging and personalized pet systems**
- **Educate player on pet care and responsibility**

Technology:
- **LLM integration for creature generation and traits**
- **Behavior Trees for complex pet decision-making and actions**
- **Heuristic evaluation for mood and needs assessment**
- **Unity for game development and creature animation**

Work Plan:
- **Shanaya: Algorithm implementation for creature generation & trait inheritance; behavior modeling system design**
- **Trinity: LLM integration for personality generation; implementation of mood & growth tracking**
- **Matthew & Luan: Core game mechanics, shop interface, behavior tree implementation, and resource management systems**