

Circle the cat

AI based game

Team members:

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Overview & Methodology

This is mainly an AI-based game but could be a two-player game. It consists of a bee hive-like grid, with a cat located in the middle of it. The player will try to circle the cat by tapping the tiles around it, but with each tap, the cat takes a step forward trying to escape the circle using an AI algorithm to try and take the shortest path to get out of the grid.

Used Technologies

We will implement this game as a Flutter mobile application using the language "Dart" on IntelliJ IDEA and Android studio.

Plan

First, we will create the Two-player version of the game, one player will act as the cat trying to escape and the second player will try to trap the cat by tapping on the tiles surrounding it. Second, we will create the player vs. AI version, which will be the cat using an AI algorithm to calculate the shortest path to escape the grid and the player will try to circle it.

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Agent (PEAS)

Performance measure	Environment	Actuators	Sensors
Winning rate, speed	Tiles, Human player	Screen display	Mouse clicks

Environment (ODESA + D)

Observability	Deterministic	Episode	Static	Agent	Discrete
Fully observable	Strategic	Sequential	Static	Multi-agent (Competitive)	Discrete

Agent program type:

Goal-based reflex agent.