p4_tracking_introduction

Project 4: Ghostbusters

I can hear you, ghost.
Running won't save you from my
Particle filter!

Introduction

Pacman spends his life running from ghosts, but things were not always so. Legend has it that many years ago, Pacman's great grandfather Grandpac learned to hunt ghosts for sport. However, he was blinded by his power and could only track ghosts by their banging and clanging.

In this project, you will design Pacman agents that use sensors to locate and eat invisible ghosts. You'll advance from locating single, stationary ghosts to hunting packs of multiple moving ghosts with ruthless efficiency.

The code for this project contains the following files, available as a zip archive.

Files you'll edit:	
`bustersAgents.py`	Agents for playing the Ghostbusters variant of Pacman.
`inference.py`	Code for tracking ghosts over time using their sounds.
Files you will not edit:	

busters.py	The main entry to Ghostbusters (replacing Pacman.py)
bustersGhostAgents.py	New ghost agents for Ghostbusters
distanceCalculator.py	Computes maze distances
game.py	Inner workings and helper classes for Pacman
ghostAgents.py	Agents to control ghosts
graphicsDisplay.py	Graphics for Pacman
graphicsUtils.py	Support for Pacman graphics
keyboardAgents.py	Keyboard interfaces to control Pacman
layout.py	Code for reading layout files and storing their contents
util.py	Utility functions

Files to Edit and Submit: You will fill in portions of `bustersAgents.py` and `inference.py` during the assignment. You should submit these files with your code and comments. Please *do not* change the other files in this distribution or submit any of our original files other than these files.

Evaluation: Your code will be autograded for technical correctness. Please *do not* change the names of any provided functions or classes within the code, or you will wreak havoc on the autograder. However, the correctness of your implementation -- not the autograder's judgements -- will be the final judge of your score. If necessary, we will review and grade assignments individually to ensure that you receive due credit for your work.

Academic Dishonesty: We will be checking your code against other submissions in the class for logical redundancy. If you copy someone else's code and submit it with minor changes, we will know. These cheat detectors are quite hard to fool, so please don't try. We trust you all to submit your own work only; *please* don't let us down. If you do, we will pursue the strongest consequences available to us.

Getting Help: You are not alone! If you find yourself stuck on something, contact the course staff for help. Office hours, section, and the discussion forum are there for your support; please use them. If you can't make our office hours, let us know

and we will schedule more. We want these projects to be rewarding and instructional, not frustrating and demoralizing. But, we don't know when or how to help unless you ask.

Discussion: Please be careful not to post spoilers.