

Intro to Game AI

CSCI 321

WWU

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Strong AI vs. Weak AI

- Strong AI:
Create programs that think and act intelligently.
- Weak AI:
Create programs that do things intelligent humans do:
 - play chess
 - drive a car
 - perform surgery
 - predict the weather
 - ...

It doesn't matter how.

Academic AI vs. Game AI

- Academic AI
 - focuses on optimal performance.
 - usually not real-time.
- Game AI
 - very limited resources (graphics is king)
 - make an engaging opponent
 - can't be too stupid
 - can't be smarter than the player
 - artificial stupidity

The Illusion of Intelligence

- Halo playtesting:
- When designers gave the NPCs very low hit points:
 - AI too easy: 36%
 - AI very intelligent: 8%
- When designers gave the NPCs very high hit points:
 - AI too easy: 0%
 - AI very intelligent: 43%

Acting human gives illusion of higher intelligence

- Act startled when player enters room
- Look around when there's a noise
- Track neighboring agents when they move

Acting stupid destroys all faith in AI

- Running into walls
- Getting stuck in corners
- Not reacting to “obvious” stimuli

Getting caught cheating destroys all faith in AI

- Instant reactions
- Seeing through walls
- Perfect aim
- Hearing everything
- Getting bigger rewards for less gold
- Obviously more hit points

The Uncanny Valley

