AI+ Game Design Agent

Category: AI, Data & Analytics | **Vendor:** AI Certs

Duration: 1.00 hours (1 days) **0.8 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format:	vILT
Certification:	AI+ Game Design Agent
Related Exam:	AI-GDA

Course Overview

The AI+ Game Design Agent™ course explores how AI agents transform gameplay, decision-making, and player interaction in modern game design. It covers key topics such as reinforcement learning, NPC intelligence, and strategic AI systems used in popular titles. Participants design intelligent agents capable of adapting to dynamic game environments. Real-world case studies like AlphaZero, StarCraft II, and The Last of Us illustrate advanced AI applications.

About This Course

The AI+ Game Design Agent™ course explores how AI agents transform gameplay, decision-making, and player interaction in modern game design. It covers key topics such as reinforcement learning, NPC intelligence, and strategic AI systems used in popular titles. Participants design intelligent agents capable of adapting to dynamic game environments. Real-world case studies like AlphaZero, StarCraft II, and The Last of Us illustrate advanced AI applications.

Prerequisites & Entry Requirements

General Prerequisites:

Basic Programming Knowledge: Familiarity with coding concepts and languages.

Game Design Fundamentals: Understanding of core game mechanics and structure.

Mathematics and Algorithms: Strong grasp of logic and problem-solving techniques.

Artificial Intelligence Basics: Introductory knowledge of AI principles and models.

Creative Thinking: Ability to envision dynamic and interactive game elements.

Learning Outcomes

Upon successful completion of this course, participants will be able to:

Understand AI agent architectures, environments, and behavior models

Design and implement AI-driven NPCs and decision-making systems in games

Apply reinforcement learning and search algorithms for adaptive gameplay

Use pathfinding and movement optimization techniques in 2D and 3D environments

Analyze case studies to evaluate strategic AI design in modern game development

Detailed Course Outline

Understanding AI Agents

What are AI Agents?

Agent Architectures and Environments

Decision Making and Behavior Basics

Introduction to Multi-Agent Systems

Case Study: Pac-Man Ghost AI

Hands On: Build a Basic Reactive AI Agent Navigating a Simple Environment Using Pygame

Introduction to AI Game Agent

What is an AI Game Agent?

Key Components of AI Game Agent

Agent Architectures

AI Game Agent Behaviors

Case Study: Racing Games (e.g., Mario Kart, Forza Horizon)

Hands-On: Creating a Simple Box Movement Game in Playcanvas

Reinforcement Learning in Game Design

Basics of Reinforcement Learning

Key Algorithms: Q-Learning and SARSA

Applying RL to Game Agents

Challenges and Solutions in Game-based RL

Case Study: AlphaZero in Games: Mastering Chess, Shogi, and Go through Self-Play and Reinforcement Learning

Hands On: Train a simple RL agent in OpenAI Gym environment

AI for NPCs and Pathfinding

Understanding NPCs as AI Agents

Simple AI Techniques for NPCs

Pathfinding Algorithms

Obstacle Avoidance and Movement Optimization

Case Study

Hands On

AI for Strategic Decision-Making

Decision Trees and Minimax for Game AI

Monte Carlo Tree Search (MCTS) for AI Agent

Utility-Based Decision Making for Game AI

AI in Real-Time Strategy (RTS) Games

Case Study: StarCraft II AI by DeepMind

Hands-On: Implement a Basic MCTS Agent for Tic-Tac-Toe Using Pygame

AI Game Agent in 3D Virtual Environments

3D Environment Representation and Challenges for AI Agents

Navigation Mesh Generation for AI Agents in 3D

Complex Agent Behaviors in 3D Worlds

Case Study: The Last of Us

Hands On: Develop a 3D AI Agent with Navigation and Interaction in Unity Using NavMesh and C#

Future Trends in AI Game Design

Current and Future AI Trends

The Future of Generalist AI in Gaming

Case Study

Capstone Project

Task Description

Practical Implementation

Testing and Debugging

Hands-on

Certification Path

AI+ Game Design Agent

Exam: AI-GDA

Frequently Asked Questions

Q: What delivery options are available for AI+ Game Design Agent?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: What certification does this course prepare me for?

The AI+ Game Design Agent course helps prepare you for the AI+ Game Design Agent certification path.

Q: Which exam does this course prepare me for?

This course prepares you for the AI-GDA official exam. You can take this exam at any exam center across United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online wherever you are located.

Q: How many CPD hours does this course provide?

The 1-day AI+ Game Design Agent course provides up to 0.8 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the AI+ Game Design Agent training?

The training takes place over 1 day(s), with each day lasting approximately 1.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for AI+ Game Design Agent?

Yes, we provide corporate training, dedicated training, and closed classes for AI+ Game Design Agent. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: AI+ Game Design Agent, AI Certs, vILT

Q: Why choose Nexus Human for AI+ Game Design Agent?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your AI+ Game Design Agent training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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