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ai-junkie

Books

I've written a couple of Al related books you may find interesting:

Programming Game AI by Example provides a comprehensive and practical introduction to the "bread and butter" AI techniques used by the game development industry, leading the reader through the process of designing, programming and implementing intelligent agents for action games using the C++ programming language.



Each technique or algorithm is described patiently, often accompanied by a step-by-step illustrated walkthrough, to ensure the reader thoroughly understands the principle before moving on to show how they can be combined to create intelligent agents capable of providing the modern video game player with an entertaining and rewarding experience. To this end the book includes detailed descriptions of the creation of game agents capable of playing team sports and deathmatch type games. Source code and pre-compiled executables for all the demos and projects found in the book can be downloaded from the Wordware website.

Techniques covered include state and goal based behavior, interagent communication, individual and group steering behaviors, team AI, graph theory, search, path planning and optimization, triggers, scripting, scripted finite state machines, perceptual modeling, modeling memory, command queuing, goal evaluation and arbitration and fuzzy logic.

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Al Techniques for Game Programming takes the difficult topics of Genetic Algorithms and Neural Networks, explaining them in "Plain English". Gone are the tortuous mathematic equations and abstract examples to be found in other books. Each chapter will take you through the theory a step at a time using fun, practical examples, providing you with all the knowledge you require to start incorporating these esoteric techniques into your own games and applications.

After a whirlwind tour of Windows programming - for those readers

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who require a refresher - you will learn how to use genetic algorithms for optimization, path-finding and evolving control sequences for your game agents. After learning the basics of neural networks, AI Techniques for Game Programming will demonstrate how you can evolve neural motion controllers for your game agents, and how neural networks may be applied to obstacle avoidance and map exploration. You will learn about backpropagation and pattern recognition, and discover how to train a network to recognize mouse gestures. Finally the book explains state-of-the-art techniques for creating neural networks with dynamic topologies.

Each chapter is complimented by well commented source code and most provide fun exercises and problems for you to practice your new found knowledge.

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