Algorithmic and Architectural Gaming Design: Implementation and Development

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Video games represent a unique blend of programming, art, music, and unbridled creativity. To the general public, they are perhaps the most exciting computer applications ever undertaken. In the field of computer science, they have been the impetus for a continuous stream of innovations designed to provide gaming enthusiasts with the most realistic and enjoyable gaming experience possible.

Algorithmic and Architectural Gaming Design: Implementation and Development discusses the most recent advances in the field of video game design, with particular emphasis on practical examples of game development, including design and implementation. The target audience of this book includes educators, students, practitioners, professionals, and researchers working in the area of video game design and development. Anyone actively developing video games will benefit from the practical application of fundamental computer science concepts demonstrated in this book.

Topics Covered:
- Adaptive Difficulty
- Artificial Intelligence
- Behavior Trees
- Collision Detection
- Game Management
- Managing NPC Behavior
- Massively Multiplayer Online Games (MMORPG)
- Pathfinding
- Physics-Based Modeling in Games
- Serious Games
- Software Engineering in Games

Market: This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners and is ideal for classroom use.

Dr. Ashok Kumar is an Assistant Professor in the School of Computing and Informatics at the University of Louisiana at Lafayette. He has teaching experience on algorithmic and architectural aspects of game engine design along with other courses such as computer architecture, operating systems, and embedded systems. He has several years of academic and industrial experience with research and development, and he has published in a variety of areas including video game design, intelligent systems, sensor-enabled systems, and low power design. He obtained his bachelor's degree from the Indian Institute of Technology, BHU, India, and his master's and doctoral degrees from the University of Louisiana at Lafayette, LA, USA.
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