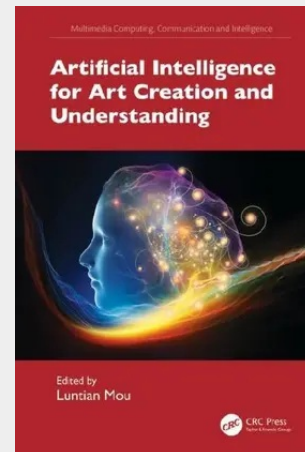


Artificial Intelligence for Art Creation and Understanding

AI-Generated Content (AIGC) is a revolutionary engine for digital content generation. In the area of art, AI has achieved remarkable advancements. AI is capable of not only creating paintings or music comparable to human masterpieces, but it also understands and appreciates artwork. For professionals and amateurs, AI is an enabling tool and an opportunity to enjoy a new world of art. This book aims to present the state-of-the-art AI technologies for art creation, understanding, and evaluation. The contents include a survey on cross-modal generation of visual and auditory content, explainable AI and music, AI-enabled robotic theater for Chinese folk art, AI for ancient Chinese music restoration and reproduction, AI for brainwave opera, artistic text style transfer, data-driven automatic choreography, Human-AI collaborative sketching, personalized music recommendation and generation based on emotion and memory (MemoMusic), understanding music and emotion from the brain, music question answering, emotional quality evaluation for generated music, and AI for image aesthetic evaluation. The key features of the book are as follows: - AI for Art is a fascinating cross-disciplinary field for the academic community as well as the public. - Each chapter is an independent interesting topic, which provides an entry for corresponding readers. - It presents SOTA AI technologies for art creation and understanding. - The artistry and appreciation of the book is wide-ranging – for example, the combination of AI with traditional Chinese art. This book is dedicated to the international cross-disciplinary AI Art community: professors, students, researchers, and engineers from AI (machine learning, computer vision, multimedia computing, affective computing, robotics, etc.), art (painting, music, dance, fashion, design, etc.), cognitive science, and psychology. General audiences can also benefit from this book.

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