Anatomy of the mind: exploring psychological mechanisms and processes with the Clarion cognitive architecture

Sun, Ron, author

Abstrak

Through a comprehensive computational theory of the mind, namely, a computational cognitive architecture, this book explores cognitive or psychological mechanisms and processes. The goal of this book is to develop a unified framework for understanding the human mind, and within the unified framework, to develop process-based, mechanistic understanding of a variety of psychological phenomena. Specifically, the book first describes the essential CLARION framework and its cognitive-psychological justifications, then its computational instantiations, and finally its applications to capturing, simulating, and explaining various psychological phenomena and empirical data. Through the lens of a unified framework, the book shows how the models and simulations shed light on psychological mechanisms and processes. In fields ranging from cognitive science, to psychology, to artificial intelligence, and even to philosophy, academic researchers, graduate and undergraduate students, and practitioners of various kinds may have interest in topics covered by this book. The book may also be suitable for seminars or courses at graduate or undergraduate levels on cognitive architectures or cognitive modeling (i.e., computational psychology).