1. Record Nr. UNISA996547955503316

Autore	Liu Jiqun
Titolo	A Behavioral Economics Approach to Interactive Information Retrieval : Understanding and Supporting Boundedly Rational Users / / Jiqun Liu
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2023] ©2023
ISBN	9783031232299 9783031232282
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (220 pages)
Collana	The Information Retrieval Series ; ; Volume 48
Disciplina	153
Soggetti	Cognitive psychology Economics - Psychological aspects
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Intro -- Foreword -- References -- Preface -- Contents -- Acronyms -- Part I: Foundation -- Chapter 1: Introduction -- 1.1 Background -- 1.2 Book Structure -- References -- Chapter 2: Formally Modeling Users in Information Retrieval -- 2.1 Introduction -- 2.2 Basic Click Models -- 2.3 Advanced Click Models -- 2.4 Clicks and Examinations in Multi-query Search Sessions -- 2.5 Incorporating Users into Click Models -- 2.6 User Models and IR Evaluation Metrics -- 2.7 Summary -- References -- Chapter 3: From Rational Agent to Human with Bounded Rationality -- 3.1 Background -- 3.2 Gaps Between Biased Users and Formal User Models -- 3.3 Hidden Problems Behind Metric-Bias Gaps -- 3.4 Preliminary Bias-Aware Interactive User Modeling and Evaluation Framework -- 3.5 Summary -- References -- Part II: Beyond Rational Agents -- Chapter 4: Bounded Rationality in Decision-Making Under Uncertainty -- 4.1 Background -- 4.2 Two Systems of Human Cognition: Which One Are We Using? -- 4.3 Reference Dependence -- 4.4 Loss Aversion, Endowment Effect, and Status Quo Bias -- 4.5 Expectation (Dis)confirmation Theory -- 4.6 Framing Effect, Confirmation Bias, and Anchoring Bias -- 4.7 Decoy Effect -- 4.8 Peak-End Rule, Recency Effect, and Remembered Utility -- 4.9 Other Biases and Heuristics in Decision-Making Under Uncertainty -- 4.10 Summary -- References -- Chapter 5: Back to the Fundamentals: Extend the

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Sommario/riassunto

This book brings together the insights from three different areas, Information Seeking and Retrieval, Cognitive Psychology, and Behavioral Economics, and shows how this new interdisciplinary approach can advance our knowledge about users interacting with diverse search systems, especially their seemingly irrational decisions and anomalies that could not be predicted by most normative models. The first part “Foundation” of this book introduces the general notions and fundamentals of this new approach, as well as the main concepts, terminology and theories. The second part “Beyond Rational Agents” describes the systematic biases and cognitive limits confirmed by behavioral experiments of varying types and explains in detail how they contradict the assumptions and predictions of formal models in information retrieval (IR). The third part “Toward A Behavioral Economics Approach” first synthesizes the findings from existing preliminary research on bounded rationality and behavioral economics modeling in information seeking, retrieval, and recommender system communities. Then, it discusses the implications, open questions and methodological challenges of applying the behavioral economics framework to different sub-areas of IR research and practices, such as modeling users and search sessions, developing unbiased learning to rank and adaptive recommendations algorithms, implementing bias-aware intelligent task support, as well as extending the conceptualization and evaluation on IR fairness, accountability, transparency and ethics (FATE) with the knowledge regarding both human biases and algorithmic biases. This book introduces a behavioral economics framework to IR scientists seeking a new perspective on both fundamental and new emerging problems of IR as well as the development and evaluation of bias-aware intelligent information systems. It is especially intended for researchers working on IR and human-information interaction who want to learn about the potential offered by behavioral economics in their own research areas.