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Nota di contenuto	1. Engaging in Student-Centered Educational Data Science through Learning Engineering -- 2. A review of clustering models in educational data science towards fairness-aware learning -- 3. Educational Data Science: Is an “Umbrella Term” or an Emergent Domain? -- 4. Educational Data Science Approach for End-to-End Quality Assurance Process for Building Credit-Worthy Online Courses -- 5. Understanding the Effect of Cohesion in Academic Writing Clarity Using Education Data Science -- 6. Sequential pattern mining in educational data: the application context, potential, strengths, and limitations -- 7. Sync Ratio and Cluster Heat Map for Visualizing Student Engagement.
Sommario/riassunto	This book describes theoretical elements, practical approaches, and

specialized tools that systematically organize, characterize, and analyze big data gathered from educational affairs and settings. Moreover, the book shows several inference criteria to leverage and produce descriptive, explanatory, and predictive closures to study and understand education phenomena at in classroom and online environments. This is why diverse researchers and scholars contribute with valuable chapters to ground with well-–sounded theoretical and methodological constructs in the novel field of Educational Data Science (EDS), which examines academic big data repositories, as well as to introduces systematic reviews, reveals valuable insights, and promotes its application to extend its practice. EDS as a transdisciplinary field relies on statistics, probability, machine learning, data mining, and analytics, in addition to biological, psychological, and neurological knowledge aboutlearning science. With this in mind, the book is devoted to those that are in charge of educational management, educators, pedagogues, academics, computer technologists, researchers, and postgraduate students, who pursue to acquire a conceptual, formal, and practical landscape of how to deploy EDS to build proactive, real- time, and reactive applications that personalize education, enhance teaching, and improve learning! Chapter “Sync Ratio and Cluster Heat Map for Visualizing Student Engagement” is available open access under a Creative Commons Attribution 4.0 International License via link.springer.com.