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Nota di contenuto	The role of robust software in automated scoring / Nitin Madnani, Aoife Cahill, and Anastassia Loukina -- Psychometric considerations when using deep learning for automated scoring / Susan Lottridge, Chris Ormerod, and Amir Jafari -- Speech analysis in assessment / Jared C. Bernstein and Jian Cheng -- Assessment of clinical skills : a case study in constructing an NLP-based scoring system for patient notes / Polina Harik, Janet Mee, Christopher Runyon, and Brian E. Clauser -- Automatic generation of multiple-choice test items from paragraphs using deep nural networks / Ruslan Mitkov, Le An Ha, Halyna Maslak, Tharindu Ranasinghe, and Vilelmini Sosoni -- Training Optimus Prime, M.D. : a case study of automated item generation using artificial intelligence : from fine-tuned GPT2 to GPT3 and beyond / Matthias von Davier -- Computational psychometrics for digital-first assessments : a blend of ML and psychometrics for item generation and scoring / Geoff LaFlair, Kevin Yancey, Burr Settles, Alina A von Davier -- Validity, fairness, and technology-based assessment / Suzanne Lane -- Evaluating fairness of automated scoring in educational measurement / Matthew S. Johnson and Daniel F. McCaffrey -- Extracting linguistic signal from item text and its application to modeling item

characteristics / Victoria Yaneva, Peter Baldwin, Le An Ha, and Christopher Runyon -- Stealth literacy assessment : leveraging games and NLP in iSTART / Ying Fang, Laura K. Allen, Rod D. Roscoe, and Danielle S. McNamara -- Measuring scientific understanding across international samples : the promise of machine translation and NLP-based machine learning technologies / Minsu Ha and Ross H. Nehm -- Making sense of college students' writing achievement and retention with automated writing evaluation / Jill Burstein, Daniel McCaffrey, Steven Holtzman & Beata Beigman Klebanov.

Sommario/riassunto

"Advancing Natural Language Processing in Educational Assessment examines the use of natural language technology in educational testing, measurement, and assessment. Recent developments in natural language processing (NLP) have enabled large-scale educational applications, though scholars and professionals may lack a shared understanding of the strengths and limitations of NLP in assessment as well as the challenges that testing organizations face in implementation. This first-of-its-kind book provides evidence-based practices for the use of NLP-based approaches to automated text and speech scoring, language proficiency assessment, technology-assisted item generation, gamification, learner feedback, and beyond. Spanning historical context, validity and fairness issues, emerging technologies, and implications for feedback and personalization, these chapters represent the most robust treatment yet about NLP for education measurement researchers, psychometricians, testing professionals, and policymakers"--