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Sommario/riassunto

This reference book by Lech T. Polkowski offers an extensive exploration of logic as it applies to computer and data sciences, and artificial intelligence. It builds upon the author's previous work, expanding on classical and non-classical logic domains including sentential, first-order, and modal logics, among others. The book emphasizes the critical role of logic in the development of contemporary computer science and artificial intelligence, highlighting complex mathematical results and their applications. It serves as a comprehensive resource for graduate and Ph.D. students, researchers, and professionals in these fields, providing detailed proofs, historical context, and problems for further study.