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	Sommario/riassunto	This volume brings together the main results in the field of Bayesian Optimization (BO), focusing on the last ten years and showing how, on the basic framework, new methods have been specialized to solve emerging problems from machine learning, artificial intelligence, and system optimization. It also analyzes the software resources available for BO and a few selected application areas. Some areas for which new results are shown include constrained optimization, safe optimization, and applied mathematics, specifically BO's use in solving difficult

nonlinear mixed integer problems. The book will help bring readers to a full understanding of the basic Bayesian Optimization framework and gain an appreciation of its potential for emerging application areas. It will be of particular interest to the data science, computer science, optimization, and engineering communities.