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Titolo	Machine learning and big data with kdb+/q // Jan Novotny [and three others]
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ISBN	1-119-40473-8 1-119-40472-X 1-119-40474-6
Edizione	[1st edition]
Descrizione fisica	1 online resource (640 pages)
Collana	Wiley finance
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Lingua di pubblicazione	Inglese
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Nota di contenuto	Fundamentals of the q programming language -- Dictionaries and tables : the q fundamentals -- Functions -- Editors and other tools -- Debugging q code -- Splayed and partitioned tables -- Joins -- Parallelisation -- Data cleaning and filtering -- Parse trees -- A few use cases -- Basic overview of statistics -- Linear regression -- Time series econometrics -- Fourier transform -- Eigensystem and PCA -- Outlier detection -- Simulating asset prices -- Basic principles of machine learning -- Linear regression with regularisation -- Nearest neighbours -- Neural networks -- AdaBoost with stumps -- Trees -- Forests -- Unsupervised machine learning : the Apriori algorithm -- Processing information -- Towards AI : Monte Carlo tree search -- Econophysics : the agent-based computational models -- Epilogue: Art.
Sommario/riassunto	Upgrade your programming language to more effectively handle high-frequency data Machine Learning and Big Data with KDB+/Q offers quants, programmers and algorithmic traders a practical entry into the powerful but non-intuitive kdb+ database and q programming language. Ideally designed to handle the speed and volume of high-frequency financial data at sell- and buy-side institutions, these tools have become the de facto standard; this book provides the foundational knowledge practitioners need to work effectively with this

rapidly-evolving approach to analytical trading. The discussion follows the natural progression of working strategy development to allow hands-on learning in a familiar sphere, illustrating the contrast of efficiency and capability between the q language and other programming approaches. Rather than an all-encompassing “bible”-type reference, this book is designed with a focus on real-world practicality -to help you quickly get up to speed and become productive with the language. Understand why kdb+/q is the ideal solution for high-frequency data Delve into “meat” of q programming to solve practical economic problems Perform everyday operations including basic regressions, cointegration, volatility estimation, modelling and more Learn advanced techniques from market impact and microstructure analyses to machine learning techniques including neural networks The kdb+ database and its underlying programming language q offer unprecedented speed and capability. As trading algorithms and financial models grow ever more complex against the markets they seek to predict, they encompass an ever-larger swath of data — more variables, more metrics, more responsiveness and altogether more “moving parts.” Traditional programming languages are increasingly failing to accommodate the growing speed and volume of data, and lack the necessary flexibility that cutting-edge financial modelling demands. Machine Learning and Big Data with KDB+/Q opens up the technology and flattens the learning curve to help you quickly adopt a more effective set of tools.
