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Autore	Sarka Dejan
Titolo	Advanced Analytics with Transact-SQL : Exploring Hidden Patterns and Rules in Your Data / / by Dejan Sarka
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ISBN	9781484271735 1484271734
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Descrizione fisica	1 online resource (308 pages)
Disciplina	005.7
Soggetti	Quantitative research Microsoft software Microsoft .NET Framework Database management Statistics Artificial intelligence - Data processing Data Analysis and Big Data Microsoft Database Management Applied Statistics Data Science
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Part I. Statistics -- 1. Descriptive Statistics.-2. Associations Between Pairs of Variables -- Part II. Data Preparation and Quality -- 3. Data Preparation -- 4. Data Quality and Information -- Part III. Dealing with Time -- 5. Time-Oriented Data -- 6. Time-Oriented Analyses -- Part IV. Data Science -- 7. Data Mining -- 8. Text Mining.
Sommario/riassunto	Learn about business intelligence (BI) features in T-SQL and how they can help you with data science and analytics efforts without the need to bring in other languages such as R and Python. This book shows you how to compute statistical measures using your existing skills in T-SQL. You will learn how to calculate descriptive statistics, including centers, spreads, skewness, and kurtosis of distributions. You will also

learn to find associations between pairs of variables, including calculating linear regression formulas and confidence levels with definite integration. No analysis is good without data quality. Advanced Analytics with Transact-SQL introduces data quality issues and shows you how to check for completeness and accuracy, and measure improvements in data quality over time. The book also explains how to optimize queries involving temporal data, such as when you search for overlapping intervals. More advanced time-oriented information in the book includes hazard and survival analysis. Forecasting with exponential moving averages and autoregression is covered as well. Every web/retail shop wants to know the products customers tend to buy together. Trying to predict the target discrete or continuous variable with few input variables is important for practically every type of business. This book helps you understand data science and the advanced algorithms use to analyze data, and terms such as data mining, machine learning, and text mining. Key to many of the solutions in this book are T-SQL window functions. Author Dejan Sarka demonstrates efficient statistical queries that are based on window functions and optimized through algorithms built using mathematical knowledge and creativity. The formulas and usage of those statistical procedures are explained so you can understand and modify the techniques presented. T-SQL is supported in SQL Server, Azure SQL Database, and in Azure Synapse Analytics. There are so many BI features in T-SQL that it might become your primary analytic database language. If you want to learn how to get information from your data with the T-SQL language that you already are familiar with, then this is the book for you. You will learn to:

- Describe distribution of variables with statistical measures
- Find associations between pairs of variables
- Evaluate the quality of the data you are analyzing
- Perform time-series analysis on your data
- Forecast values of a continuous variable
- Perform market-basket analysis to predict customer purchasing patterns
- Predict target variable outcomes from one or more input variables
- Categorize passages of text by extracting and analyzing keywords.
