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Titolo	Mastering Clojure data analysis : leverage the power and flexibility of Clojure through this practical guide to data analysis / / Eric Rochester ; cover image by Jarosaw Blaminsky
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Descrizione fisica	1 online resource (340 p.)
Collana	Community Experience Distilled
Disciplina	302.3
Soggetti	Social networks - Mathematical models Geographic information systems - England Application software - Development Electronic books.
Lingua di pubblicazione	Inglese
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Note generali	Includes index.
Nota di contenuto	Cover; Copyright; Credits; About the Author; About the Reviewers; www.PacktPub.com; Table of Contents; Preface; Chapter 1: Network Analysis - The Six Degrees of Kevin Bacon; Analyzing social networks; Getting the data; Understanding graphs; Implementing the graph; Loading the data; Measuring social network graphs; Density; Degrees; Paths; The average path length; Network diameter; Clustering coefficient; Centrality; Degrees of separation; Visualizing the graph; Setting up ClojureScript; A force-directed layout; A hive plot; A pie chart; Summary Chapter 2: GIS Analysis - Mapping Climate ChangeUnderstanding GIS; Mapping the climate change; Downloading and extracting the data; Downloading the files; Extracting the files; Transforming the data - filtering; Rolling averages; Reading the data; Interpolating sample points and generating heat maps using inverse distance weighting (IDW); Working with map projections; Finding a base map; Working with ArcGIS; Summary; Chapter 3: Topic Modeling - Changing Concerns in State of the Union Addresses; Understanding data in State of the Union addresses; Understanding topic modeling

Preparing for visualizations
Setting up the project; Getting the data; Loading the data into MALLET; Visualizing with D3 and ClojureScript; Exploring the topics; Exploring topic 43; Exploring topic 26; Exploring topic 42; Summary; Chapter 4: Classifying UFO Sightings; Getting the data; Extracting the data; Dealing with messy data; Visualizing UFO data; Description; Topic modeling descriptions; Hoaxes; Preparing the data; Reading the data into a sequence of data records; Splitting out the NUFORC comments; Categorizing the documents based on the comments
Partitioning the documents into directories based on the categories
Dividing them into training and test sets; Classifying the data; Coding the classifier interface; Running the classifier and examining the results; Summary; Chapter 5: Benford's Law - Detecting Natural Progressions of Numbers; Learning about Benford's Law; Applying Benford's law to compound interest; Looking at the world population data; Failing Benford's Law; Case studies; Summary; Chapter 6: Sentiment Analysis - Categorizing Hotel Reviews; Understanding sentiment analysis; Getting hotel review data; Exploring the data
Preparing the data
Tokenizing; Creating feature vectors; Creating feature vector functions and POS tagging; Cross validating the results; Calculating error rates; Using the Weka machine learning library; Connecting Weka and cross validation; Understanding maximum entropy classifiers; Understanding naive Bayesian classifiers; Running the experiment; Examining the results; Combining the error rates; Improving the results; Summary; Chapter 7: Null Hypothesis Tests - Analyzing Crime Data; Introducing confirmatory data analysis; Understanding null hypothesis testing; Understanding the process
Formulating an initial hypothesis

Sommario/riassunto

This book consists of a practical, example-oriented approach that aims to help you learn how to use Clojure for data analysis quickly and efficiently. This book is great for those who have experience with Clojure and who need to use it to perform data analysis. This book will also be hugely beneficial for readers with basic experience in data analysis and statistics.
