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Nota di contenuto	Cover ; Copyright; Credits; Foreword; About the Author; Acknowledgments; About the Reviewers; www.PacktPub.com; Table of Contents; Preface; Chapter 1: Introduction to Machine Learning; Objective; Getting in touch; Different areas where machine learning is being used; Why use F#?; Supervised machine learning; Training and test dataset/corpus; Some motivating real life examples of supervised learning; Nearest Neighbour algorithm (a.k.a k-NN algorithm); Distance metrics; Decision tree algorithms; Unsupervised learning; Machine learning frameworks; Machine learning for fun and profit Recognizing handwritten digits - your ""Hello World"" ML programHow does this work?; Summary; Chapter 2: Linear Regression; Objective; Different types of linear regression algorithms; APIs used; Math.NET Numerics for F# 3.7.0; Getting Math.NET; Experimenting with Math.NET; The basics of matrices and vectors (a short and sweet refresher); Creating a vector; Creating a matrix; Finding the transpose of a matrix; Finding the inverse of a matrix; Trace of a matrix; QR decomposition of a matrix; SVD of a matrix; Linear regression method of least square Finding linear regression coefficients using F#Finding the linear regression coefficients using Math.NET; Putting it together with Math.NET and FsPlot; Multiple linear regression; Multiple linear regression

and variations using Math.NET; Weighted linear regression; Plotting the result of multiple linear regression; Ridge regression; Multivariate multiple linear regression; Feature scaling; Summary; Chapter 3: Classification Techniques; Objective; Different classification algorithms you will learn; Some interesting things you can do; Binary classification using k-NN; How does it work?
Finding cancerous cells using k-NN: a case studyUnderstanding logistic regression ; The sigmoid function chart; Binary classification using logistic regression (using Accord.NET); Multiclass classification using logistic regression; How does it work?; Multiclass classification using decision trees; Obtaining and using WekaSharp; How does it work?; Predicting a traffic jam using a decision tree: a case study; Challenge yourself!; Summary; Chapter 4: Information Retrieval; Objective; Different IR algorithms you will learn; What interesting things can you do?
Information retrieval using tf-idfMeasures of similarity; Generating a PDF from a histogram; Minkowski family; L1 family; Intersection family; Inner Product family; Fidelity family or squared-chord family; Squared L2 family; Shannon's Entropy family; Similarity of asymmetric binary attributes; Some example usages of distance metrics; Finding similar cookies using asymmetric binary similarity measures;
Grouping/clustering color images based on Canberra distance; Summary; Chapter 5: Collaborative Filtering; Objective; Different classification algorithms you will learn
Vocabulary of collaborative filtering