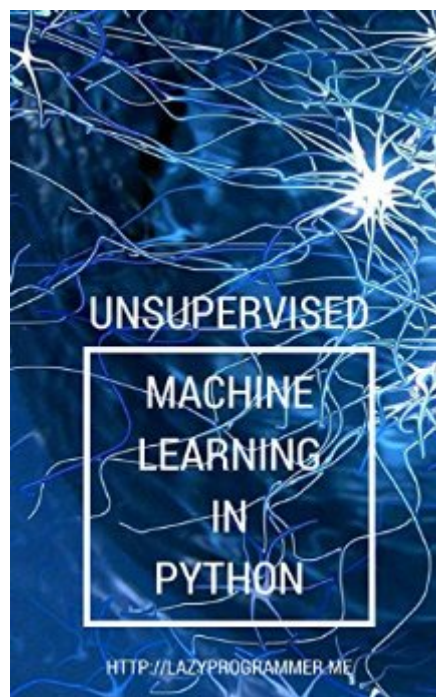


The book was found

Unsupervised Machine Learning In Python: Master Data Science And Machine Learning With Cluster Analysis, Gaussian Mixture Models, And Principal Components Analysis



Synopsis

In a real-world environment, you can imagine that a robot or an artificial intelligence won't always have access to the optimal answer, or maybe there isn't an optimal correct answer. You'd want that robot to be able to explore the world on its own, and learn things just by looking for patterns. Think about the large amounts of data being collected today, by the likes of the NSA, Google, and other organizations. No human could possibly sift through all that data manually. It was reported recently in the Washington Post and Wall Street Journal that the National Security Agency collects so much surveillance data, it is no longer effective. Could automated pattern discovery solve this problem? Do you ever wonder how we get the data that we use in our supervised machine learning algorithms? Kaggle always seems to provide us with a nice CSV, complete with Xs and corresponding Ys. If you haven't been involved in acquiring data yourself, you might not have thought about this, but someone has to make this data! A lot of the time this involves manual labor. Sometimes, you don't have access to the correct information or it is infeasible or costly to acquire. You still want to have some idea of the structure of the data. This is where unsupervised machine learning comes into play. In this book we are first going to talk about clustering. This is where instead of training on labels, we try to create our own labels. We'll do this by grouping together data that looks alike. The 2 methods of clustering we'll talk about: k-means clustering and hierarchical clustering. Next, because in machine learning we like to talk about probability distributions, we'll go into Gaussian mixture models and kernel density estimation, where we talk about how to learn the probability distribution of a set of data. One interesting fact is that under certain conditions, Gaussian mixture models and k-means clustering are exactly the same! We'll prove how this is the case. Lastly, we'll look at the theory behind principal components analysis or PCA. PCA has many useful applications: visualization, dimensionality reduction, denoising, and de-correlation. You will see how it allows us to take a different perspective on latent variables, which first appear when we talk about k-means clustering and GMMs. All the algorithms we'll talk about in this course are staples in machine learning and data science, so if you want to know how to automatically find patterns in your data with data mining and pattern extraction, without needing someone to put in manual work to label that data, then this book is for you. All of the materials required to follow along in this book are free: You just need to be able to download and install Python, Numpy, Scipy, Matplotlib, and Sci-kit Learn.

Book Information

File Size: 551 KB

Print Length: 57 pages

Simultaneous Device Usage: Unlimited

Publication Date: May 22, 2016

Sold by: Digital Services LLC

Language: English

ASIN: B01G1HH5T4

Text-to-Speech: Enabled

X-Ray: Not Enabled

Word Wise: Not Enabled

Lending: Not Enabled

Enhanced Typesetting: Enabled

Best Sellers Rank: #51,459 Paid in Kindle Store (See Top 100 Paid in Kindle Store) #19 in Kindle Store > Kindle Short Reads > 90 minutes (44-64 pages) > Computers & Technology #38 in Books > Computers & Technology > Computer Science > AI & Machine Learning > Intelligence & Semantics #343 in Kindle Store > Kindle eBooks > Computers & Technology

Customer Reviews

I have implemented many unsupervised algorithm but this takes you in a different level

great

[Download to continue reading...](#)

Unsupervised Machine Learning in Python: Master Data Science and Machine Learning with Cluster Analysis, Gaussian Mixture Models, and Principal Components Analysis
Unsupervised Deep Learning in Python: Master Data Science and Machine Learning with Modern Neural Networks written in Python and Theano (Machine Learning in Python)
Deep Learning in Python Prerequisites: Master Data Science and Machine Learning with Linear Regression and Logistic Regression in Python (Machine Learning in Python)
Convolutional Neural Networks in Python: Master Data Science and Machine Learning with Modern Deep Learning in Python, Theano, and TensorFlow (Machine Learning in Python)
Deep Learning in Python: Master Data Science and Machine Learning with Modern Neural Networks written in Python, Theano, and TensorFlow (Machine Learning in Python)
Python: Python Programming Course: Learn the Crash Course to Learning the Basics of Python (Python Programming, Python Programming Course, Python Beginners Course)
Deep Learning: Recurrent Neural Networks in Python: LSTM, GRU, and more

RNN machine learning architectures in Python and Theano (Machine Learning in Python) Gaussian Processes for Machine Learning (Adaptive Computation and Machine Learning series) Analytics: Data Science, Data Analysis and Predictive Analytics for Business (Algorithms, Business Intelligence, Statistical Analysis, Decision Analysis, Business Analytics, Data Mining, Big Data) A collection of Advanced Data Science and Machine Learning Interview Questions Solved in Python and Spark (II): Hands-on Big Data and Machine ... Programming Interview Questions) (Volume 7) Linux Enterprise Cluster: Build a Highly Available Cluster with Commodity Hardware and Free Software Data Analytics: What Every Business Must Know About Big Data And Data Science (Data Analytics for Business, Predictive Analysis, Big Data) Python: Python Programming For Beginners - The Comprehensive Guide To Python Programming: Computer Programming, Computer Language, Computer Science (Machine Language) Data Analytics: Practical Data Analysis and Statistical Guide to Transform and Evolve Any Business. Leveraging the Power of Data Analytics, Data ... (Hacking Freedom and Data Driven) (Volume 2) Visual Developer Developing Custom Delphi 3 Components: Master the Art of Creating Powerful Delphi 3 Software Components Developing Custom Delphi Components: Master the Art of Creating Powerful Delphi Software Components Python: Python Programming For Beginners - The Comprehensive Guide To Python Programming: Computer Programming, Computer Language, Computer Science Ruby: Programming, Master's Handbook: A TRUE Beginner's Guide! Problem Solving, Code, Data Science, Data Structures & Algorithms (Code like a PRO in ... web design, tech, perl, ajax, swift, python,) Java Programming: Master's Handbook: A TRUE Beginner's Guide! Problem Solving, Code, Data Science, Data Structures & Algorithms (Code like a PRO in ... web design, tech, perl, ajax, swift, python) Python: Programming, Master's Handbook; A TRUE Beginner's Guide! Problem Solving, Code, Data Science, Data Structures & Algorithms (Code like a PRO ... engineering, r programming, iOS development)

[Dmca](#)