



Quick answers to common problems

scikit-learn Cookbook

Over 50 recipes to incorporate scikit-learn into every step of the data science pipeline, from feature extraction to model building and model evaluation

Trent Hauck

 open source 
PUBLISHING

Scikit Learn Cookbook

Jicheng Xie



Scikit Learn Cookbook:

scikit-learn Cookbook Julian Avila, Trent Hauck, 2017-11-16 Learn to use scikit learn operations and functions for Machine Learning and deep learning applications About This Book Handle a variety of machine learning tasks effortlessly by leveraging the power of scikit learn Perform supervised and unsupervised learning with ease and evaluate the performance of your model Practical easy to understand recipes aimed at helping you choose the right machine learning algorithm Who This Book Is For Data Analysts already familiar with Python but not so much with scikit learn who want quick solutions to the common machine learning problems will find this book to be very useful If you are a Python programmer who wants to take a dive into the world of machine learning in a practical manner this book will help you too What You Will Learn Build predictive models in minutes by using scikit learn Understand the differences and relationships between Classification and Regression two types of Supervised Learning Use distance metrics to predict in Clustering a type of Unsupervised Learning Find points with similar characteristics with Nearest Neighbors Use automation and cross validation to find a best model and focus on it for a data product Choose among the best algorithm of many or use them together in an ensemble Create your own estimator with the simple syntax of sklearn Explore the feed forward neural networks available in scikit learn In Detail Python is quickly becoming the go to language for analysts and data scientists due to its simplicity and flexibility and within the Python data space scikit learn is the unequivocal choice for machine learning This book includes walk throughs and solutions to the common as well as the not so common problems in machine learning and how scikit learn can be leveraged to perform various machine learning tasks effectively The second edition begins with taking you through recipes on evaluating the statistical properties of data and generates synthetic data for machine learning modelling As you progress through the chapters you will come across recipes that will teach you to implement techniques like data pre processing linear regression logistic regression K NN Naive Bayes classification decision trees Ensembles and much more Furthermore you will learn to optimize your models with multi class classification cross validation model evaluation and dive deeper in to implementing deep learning with scikit learn Along with covering the enhanced features on model section API and new features like classifiers regressors and estimators the book also contains recipes on evaluating and fine tuning the performance of your model By the end of this book you will have explored plethora of features offered by scikit learn for Python to solve any machine learning problem you come across Style and Approach This book consists of practical recipes on scikit learn that target novices as well as intermediate users It goes deep into the technical issues covers additional protocols and many more real live examples so that you are able to implement it in your daily life scenarios **Scikit-Learn Cookbook** Trent Hauck, 2014-10-31 If you are a data scientist already familiar with Python but not Scikit Learn or are familiar with other programming languages like R and want to take the plunge with the gold standard of Python machine learning libraries then this is the book for you *Scikit-learn Cookbook* Trent Hauck, 2014 If you are a data scientist already familiar with Python but

not Scikit Learn or are familiar with other programming languages like R and want to take the plunge with the gold standard of Python machine learning libraries then this is the book for you *Machine Learning Cookbook with Python* Rehan Guha, 2020-11-12 A Cookbook that will help you implement Machine Learning algorithms and techniques by building real world projects

KEY FEATURES Learn how to handle an entire Machine Learning Pipeline supported with adequate mathematics Create Predictive Models and choose the right model for various types of Datasets Learn the art of tuning a model to improve accuracy as per Business requirements Get familiar with concepts related to Data Analytics with Visualization Data Science and Machine Learning

DESCRIPTION Machine Learning does not have to be intimidating at all This book focuses on the concepts of Machine Learning and Data Analytics with mathematical explanations and programming examples All the codes are written in Python as it is one of the most popular programming languages used for Data Science and Machine Learning Here I have leveraged multiple libraries like NumPy Pandas scikit learn etc to ease our task and not reinvent the wheel There are five projects in total each addressing a unique problem With the recipes in this cookbook one will learn how to solve Machine Learning problems for real time data and perform Data Analysis and Analytics Classification and beyond The datasets used are also unique and will help one to think understand the problem and proceed towards the goal The book is not saturated with Mathematics but mostly all the Mathematical concepts are covered for the important topics Every chapter typically starts with some theory and prerequisites and then it gradually dives into the implementation of the same concept using Python keeping a project in the background

WHAT WILL YOU LEARN Understand the working of the O S E M N framework in Data Science Get familiar with the end to end implementation of Machine Learning Pipeline Learn how to implement Machine Learning algorithms and concepts using Python Learn how to build a Predictive Model for a Business case

WHO THIS BOOK IS FOR This cookbook is meant for anybody who is passionate enough to get into the World of Machine Learning and has a preliminary understanding of the Basics of Linear Algebra Calculus Probability and Statistics This book also serves as a reference guidebook for intermediate Machine Learning practitioners

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Python Machine Learning Cookbook Giuseppe Ciaburro, Prateek Joshi, 2019-03-30 Discover powerful ways to effectively solve real world machine learning problems using key libraries including scikit learn TensorFlow and PyTorch

Key Features Learn and implement machine learning algorithms in a variety of real life scenarios Cover a range of tasks catering to supervised unsupervised and reinforcement learning techniques Find easy to follow code solutions for tackling common and not so common challenges

Book Description This eagerly anticipated second edition of the popular Python Machine Learning Cookbook will enable you to adopt a fresh approach to dealing with real world machine learning and deep learning tasks With the help of over 100 recipes you will learn to build powerful machine learning applications using modern libraries from the Python ecosystem The book will also guide you on how to implement various machine learning algorithms for

classification clustering and recommendation engines using a recipe based approach With emphasis on practical solutions dedicated sections in the book will help you to apply supervised and unsupervised learning techniques to real world problems Toward the concluding chapters you will get to grips with recipes that teach you advanced techniques including reinforcement learning deep neural networks and automated machine learning By the end of this book you will be equipped with the skills you need to apply machine learning techniques and leverage the full capabilities of the Python ecosystem through real world examples What you will learn Use predictive modeling and apply it to real world problems Explore data visualization techniques to interact with your data Learn how to build a recommendation engine Understand how to interact with text data and build models to analyze it Work with speech data and recognize spoken words using Hidden Markov Models Get well versed with reinforcement learning automated ML and transfer learning Work with image data and build systems for image recognition and biometric face recognition Use deep neural networks to build an optical character recognition system Who this book is for This book is for data scientists machine learning developers deep learning enthusiasts and Python programmers who want to solve real world challenges using machine learning techniques and algorithms If you are facing challenges at work and want ready to use code solutions to cover key tasks in machine learning and the deep learning domain then this book is what you need Familiarity with Python programming and machine learning concepts will be useful

Ensemble Machine Learning Cookbook Dipayan Sarkar, Vijayalakshmi Natarajan, 2019-01-31 Implement machine learning algorithms to build ensemble models using Keras H2O Scikit Learn Pandas and more Key Features Apply popular machine learning algorithms using a recipe based approach Implement boosting bagging and stacking ensemble methods to improve machine learning models Discover real world ensemble applications and encounter complex challenges in Kaggle competitions

Book Description Ensemble modeling is an approach used to improve the performance of machine learning models It combines two or more similar or dissimilar machine learning algorithms to deliver superior intellectual powers This book will help you to implement popular machine learning algorithms to cover different paradigms of ensemble machine learning such as boosting bagging and stacking The Ensemble Machine Learning Cookbook will start by getting you acquainted with the basics of ensemble techniques and exploratory data analysis You ll then learn to implement tasks related to statistical and machine learning algorithms to understand the ensemble of multiple heterogeneous algorithms It will also ensure that you don t miss out on key topics such as like resampling methods As you progress you ll get a better understanding of bagging boosting stacking and working with the Random Forest algorithm using real world examples The book will highlight how these ensemble methods use multiple models to improve machine learning results as compared to a single model In the concluding chapters you ll delve into advanced ensemble models using neural networks natural language processing and more You ll also be able to implement models such as fraud detection text categorization and sentiment analysis By the end of this book you ll be able to harness ensemble techniques and the working mechanisms of machine

learning algorithms to build intelligent models using individual recipes What you will learn Understand how to use machine learning algorithms for regression and classification problems Implement ensemble techniques such as averaging weighted averaging and max voting Get to grips with advanced ensemble methods such as bootstrapping bagging and stacking Use Random Forest for tasks such as classification and regression Implement an ensemble of homogeneous and heterogeneous machine learning algorithms Learn and implement various boosting techniques such as AdaBoost Gradient Boosting Machine and XGBoost Who this book is for This book is designed for data scientists machine learning developers and deep learning enthusiasts who want to delve into machine learning algorithms to build powerful ensemble models Working knowledge of Python programming and basic statistics is a must to help you grasp the concepts in the book [Python Machine Learning Cookbook](#) Prateek Joshi, 2016-06-23 100 recipes that teach you how to perform various machine learning tasks in the real world About This Book Understand which algorithms to use in a given context with the help of this exciting recipe based guide Learn about perceptrons and see how they are used to build neural networks Stuck while making sense of images text speech and real estate This guide will come to your rescue showing you how to perform machine learning for each one of these using various techniques Who This Book Is For This book is for Python programmers who are looking to use machine learning algorithms to create real world applications This book is friendly to Python beginners but familiarity with Python programming would certainly be useful to play around with the code What You Will Learn Explore classification algorithms and apply them to the income bracket estimation problem Use predictive modeling and apply it to real world problems Understand how to perform market segmentation using unsupervised learning Explore data visualization techniques to interact with your data in diverse ways Find out how to build a recommendation engine Understand how to interact with text data and build models to analyze it Work with speech data and recognize spoken words using Hidden Markov Models Analyze stock market data using Conditional Random Fields Work with image data and build systems for image recognition and biometric face recognition Grasp how to use deep neural networks to build an optical character recognition system In Detail Machine learning is becoming increasingly pervasive in the modern data driven world It is used extensively across many fields such as search engines robotics self driving cars and more With this book you will learn how to perform various machine learning tasks in different environments We ll start by exploring a range of real life scenarios where machine learning can be used and look at various building blocks Throughout the book you ll use a wide variety of machine learning algorithms to solve real world problems and use Python to implement these algorithms You ll discover how to deal with various types of data and explore the differences between machine learning paradigms such as supervised and unsupervised learning We also cover a range of regression techniques classification algorithms predictive modeling data visualization techniques recommendation engines and more with the help of real world examples Style and approach You will explore various real life scenarios in this book where machine learning can be used and learn about different building blocks of

machine learning using independent recipes in the book *scikit-learn : Machine Learning Simplified* Raul Garreta,Guillermo Moncecchi,Trent Hauck,Gavin Hackeling,2017-11-10 Implement scikit learn into every step of the data science pipeline About This Book Use Python and scikit learn to create intelligent applications Discover how to apply algorithms in a variety of situations to tackle common and not so common challenges in the machine learning domain A practical example based guide to help you gain expertise in implementing and evaluating machine learning systems using scikit learn Who This Book Is For If you are a programmer and want to explore machine learning and data based methods to build intelligent applications and enhance your programming skills this is the course for you No previous experience with machine learning algorithms is required What You Will Learn Review fundamental concepts including supervised and unsupervised experiences common tasks and performance metrics Classify objects from documents to human faces and flower species based on some of their features using a variety of methods from Support Vector Machines to Naive Bayes Use Decision Trees to explain the main causes of certain phenomena such as passenger survival on the Titanic Evaluate the performance of machine learning systems in common tasks Master algorithms of various levels of complexity and learn how to analyze data at the same time Learn just enough math to think about the connections between various algorithms Customize machine learning algorithms to fit your problem and learn how to modify them when the situation calls for it Incorporate other packages from the Python ecosystem to munge and visualize your dataset Improve the way you build your models using parallelization techniques In Detail Machine learning the art of creating applications that learn from experience and data has been around for many years Python is quickly becoming the go to language for analysts and data scientists due to its simplicity and flexibility moreover within the Python data space scikit learn is the unequivocal choice for machine learning The course combines an introduction to some of the main concepts and methods in machine learning with practical hands on examples of real world problems The course starts by walking through different methods to prepare your data be it a dataset with missing values or text columns that require the categories to be turned into indicator variables After the data is ready you ll learn different techniques aligned with different objectives be it a dataset with known outcomes such as sales by state or more complicated problems such as clustering similar customers Finally you ll learn how to polish your algorithm to ensure that it s both accurate and resilient to new datasets You will learn to incorporate machine learning in your applications Ranging from handwritten digit recognition to document classification examples are solved step by step using scikit learn and Python By the end of this course you will have learned how to build applications that learn from experience by applying the main concepts and techniques of machine learning Style and Approach Implement scikit learn using engaging examples and fun exercises and with a gentle and friendly but comprehensive learn by doing approach This is a practical course which analyzes compelling data about life health and death with the help of tutorials It offers you a useful way of interpreting the data that s specific to this course but that can also be applied to any other data This course is

designed to be both a guide and a reference for moving beyond the basics of scikit learn *TensorFlow Machine Learning Cookbook* Nick McClure,2018-08-31 Skip the theory and get the most out of Tensorflow to build production ready machine learning models Key Features Exploit the features of Tensorflow to build and deploy machine learning models Train neural networks to tackle real world problems in Computer Vision and NLP Handy techniques to write production ready code for your TensorFlow models Book Description TensorFlow is an open source software library for Machine Intelligence The independent recipes in this book will teach you how to use TensorFlow for complex data computations and allow you to dig deeper and gain more insights into your data than ever before With the help of this book you will work with recipes for training models model evaluation sentiment analysis regression analysis clustering analysis artificial neural networks and more You will explore RNNs CNNs GANs reinforcement learning and capsule networks each using Google s machine learning library TensorFlow Through real world examples you will get hands on experience with linear regression techniques with TensorFlow Once you are familiar and comfortable with the TensorFlow ecosystem you will be shown how to take it to production By the end of the book you will be proficient in the field of machine intelligence using TensorFlow You will also have good insight into deep learning and be capable of implementing machine learning algorithms in real world scenarios What you will learn Become familiar with the basic features of the TensorFlow library Get to know Linear Regression techniques with TensorFlow Learn SVMs with hands on recipes Implement neural networks to improve predictive modeling Apply NLP and sentiment analysis to your data Master CNN and RNN through practical recipes Implement the gradient boosted random forest to predict housing prices Take TensorFlow into production Who this book is for If you are a data scientist or a machine learning engineer with some knowledge of linear algebra statistics and machine learning this book is for you If you want to skip the theory and build production ready machine learning models using Tensorflow without reading pages and pages of material this book is for you Some background in Python programming is assumed [Apache Spark Deep Learning Cookbook](#) Ahmed Sherif,Amrith Ravindra,2018-07-13 A solution based guide to put your deep learning models into production with the power of Apache Spark Key Features Discover practical recipes for distributed deep learning with Apache Spark Learn to use libraries such as Keras and TensorFlow Solve problems in order to train your deep learning models on Apache Spark Book Description With deep learning gaining rapid mainstream adoption in modern day industries organizations are looking for ways to unite popular big data tools with highly efficient deep learning libraries As a result this will help deep learning models train with higher efficiency and speed With the help of the Apache Spark Deep Learning Cookbook you ll work through specific recipes to generate outcomes for deep learning algorithms without getting bogged down in theory From setting up Apache Spark for deep learning to implementing types of neural net this book tackles both common and not so common problems to perform deep learning on a distributed environment In addition to this you ll get access to deep learning code within Spark that can be reused to answer similar problems or tweaked to answer slightly

different problems You will also learn how to stream and cluster your data with Spark Once you have got to grips with the basics you ll explore how to implement and deploy deep learning models such as Convolutional Neural Networks CNN and Recurrent Neural Networks RNN in Spark using popular libraries such as TensorFlow and Keras By the end of the book you ll have the expertise to train and deploy efficient deep learning models on Apache Spark What you will learn Set up a fully functional Spark environment Understand practical machine learning and deep learning concepts Apply built in machine learning libraries within Spark Explore libraries that are compatible with TensorFlow and Keras Explore NLP models such as Word2vec and TF IDF on Spark Organize dataframes for deep learning evaluation Apply testing and training modeling to ensure accuracy Access readily available code that may be reusable Who this book is for If you re looking for a practical and highly useful resource for implementing efficiently distributed deep learning models with Apache Spark then the Apache Spark Deep Learning Cookbook is for you Knowledge of the core machine learning concepts and a basic understanding of the Apache Spark framework is required to get the best out of this book Additionally some programming knowledge in Python is a plus

Apache Spark 2.x Machine Learning Cookbook Siamak Amirghodsi, Meenakshi Rajendran, Broderick Hall, Shuen Mei, 2017-09-22 Simplify machine learning model implementations with Spark About This Book Solve the day to day problems of data science with Spark This unique cookbook consists of exciting and intuitive numerical recipes Optimize your work by acquiring cleaning analyzing predicting and visualizing your data Who This Book Is For This book is for Scala developers with a fairly good exposure to and understanding of machine learning techniques but lack practical implementations with Spark A solid knowledge of machine learning algorithms is assumed as well as hands on experience of implementing ML algorithms with Scala However you do not need to be acquainted with the Spark ML libraries and ecosystem What You Will Learn Get to know how Scala and Spark go hand in hand for developers when developing ML systems with Spark Build a recommendation engine that scales with Spark Find out how to build unsupervised clustering systems to classify data in Spark Build machine learning systems with the Decision Tree and Ensemble models in Spark Deal with the curse of high dimensionality in big data using Spark Implement Text analytics for Search Engines in Spark Streaming Machine Learning System implementation using Spark In Detail Machine learning aims to extract knowledge from data relying on fundamental concepts in computer science statistics probability and optimization Learning about algorithms enables a wide range of applications from everyday tasks such as product recommendations and spam filtering to cutting edge applications such as self driving cars and personalized medicine You will gain hands on experience of applying these principles using Apache Spark a resilient cluster computing system well suited for large scale machine learning tasks This book begins with a quick overview of setting up the necessary IDEs to facilitate the execution of code examples that will be covered in various chapters It also highlights some key issues developers face while working with machine learning algorithms on the Spark platform We progress by uncovering the various Spark APIs and the implementation of ML

algorithms with developing classification systems recommendation engines text analytics clustering and learning systems

Toward the final chapters we ll focus on building high end applications and explain various unsupervised methodologies and challenges to tackle when implementing with big data ML systems

Style and approach This book is packed with intuitive recipes supported with line by line explanations to help you understand how to optimize your work flow and resolve problems when working with complex data modeling tasks and predictive algorithms This is a valuable resource for data scientists and those working on large scale data projects

Python Deep Learning Cookbook Indra den Bakker,2017-10-27 Solve different problems in modelling deep neural networks using Python Tensorflow and Keras with this practical guide

About This Book Practical recipes on training different neural network models and tuning them for optimal performance Use Python frameworks like TensorFlow Caffe Keras Theano for Natural Language Processing Computer Vision and more

A hands on guide covering the common as well as the not so common problems in deep learning using Python

Who This Book Is For This book is intended for machine learning professionals who are looking to use deep learning algorithms to create real world applications using Python

Thorough understanding of the machine learning concepts and Python libraries such as NumPy SciPy and scikit learn is expected

Additionally basic knowledge in linear algebra and calculus is desired

What You Will Learn

- Implement different neural network models in Python
- Select the best Python framework for deep learning such as PyTorch Tensorflow MXNet and Keras
- Apply tips and tricks related to neural networks internals to boost learning performances
- Consolidate machine learning principles and apply them in the deep learning field
- Reuse and adapt Python code snippets to everyday problems
- Evaluate the cost benefits and performance implication of each discussed solution

In Detail

Deep Learning is revolutionizing a wide range of industries For many applications deep learning has proven to outperform humans by making faster and more accurate predictions

This book provides a top down and bottom up approach to demonstrate deep learning solutions to real world problems in different areas

These applications include Computer Vision Natural Language Processing Time Series and Robotics

The Python Deep Learning Cookbook presents technical solutions to the issues presented along with a detailed explanation of the solutions

Furthermore a discussion on corresponding pros and cons of implementing the proposed solution using one of the popular frameworks like TensorFlow PyTorch Keras and CNTK is provided

The book includes recipes that are related to the basic concepts of neural networks

All techniques s as well as classical networks topologies

The main purpose of this book is to provide Python programmers a detailed list of recipes to apply deep learning to common and not so common scenarios

Style and approach Unique blend of independent recipes arranged in the most logical manner

[Mastering Predictive Analytics with scikit-learn and TensorFlow](#) Alvaro Fuentes,2018-09-29

Learn advanced techniques to improve the performance and quality of your predictive models

Key Features

- Use ensemble methods to improve the performance of predictive analytics models
- Implement feature selection dimensionality reduction and cross validation techniques
- Develop neural network models and master the basics of deep

learningBook Description Python is a programming language that provides a wide range of features that can be used in the field of data science Mastering Predictive Analytics with scikit learn and TensorFlow covers various implementations of ensemble methods how they are used with real world datasets and how they improve prediction accuracy in classification and regression problems This book starts with ensemble methods and their features You will see that scikit learn provides tools for choosing hyperparameters for models As you make your way through the book you will cover the nitty gritty of predictive analytics and explore its features and characteristics You will also be introduced to artificial neural networks and TensorFlow and how it is used to create neural networks In the final chapter you will explore factors such as computational power along with improvement methods and software enhancements for efficient predictive analytics By the end of this book you will be well versed in using deep neural networks to solve common problems in big data analysis What you will learnUse ensemble algorithms to obtain accurate predictionsApply dimensionality reduction techniques to combine features and build better modelsChoose the optimal hyperparameters using cross validationImplement different techniques to solve current challenges in the predictive analytics domainUnderstand various elements of deep neural network DNN modelsImplement neural networks to solve both classification and regression problemsWho this book is for Mastering Predictive Analytics with scikit learn and TensorFlow is for data analysts software engineers and machine learning developers who are interested in implementing advanced predictive analytics using Python Business intelligence experts will also find this book indispensable as it will teach them how to progress from basic predictive models to building advanced models and producing more accurate predictions Prior knowledge of Python and familiarity with predictive analytics concepts are assumed *Machine Learning with scikit-learn Quick Start Guide* Kevin Jolly,2018-10-30 Deploy supervised and unsupervised machine learning algorithms using scikit learn to perform classification regression and clustering Key FeaturesBuild your first machine learning model using scikit learnTrain supervised and unsupervised models using popular techniques such as classification regression and clusteringUnderstand how scikit learn can be applied to different types of machine learning problemsBook Description Scikit learn is a robust machine learning library for the Python programming language It provides a set of supervised and unsupervised learning algorithms This book is the easiest way to learn how to deploy optimize and evaluate all of the important machine learning algorithms that scikit learn provides This book teaches you how to use scikit learn for machine learning You will start by setting up and configuring your machine learning environment with scikit learn To put scikit learn to use you will learn how to implement various supervised and unsupervised machine learning models You will learn classification regression and clustering techniques to work with different types of datasets and train your models Finally you will learn about an effective pipeline to help you build a machine learning project from scratch By the end of this book you will be confident in building your own machine learning models for accurate predictions What you will learnLearn how to work with all scikit learn s machine learning algorithmsInstall and set up scikit learn to build your first machine learning

model
Employ Unsupervised Machine Learning Algorithms to cluster unlabelled data into groups
Perform classification and regression machine learning
Use an effective pipeline to build a machine learning project from scratch
Who this book is for
This book is for aspiring machine learning developers who want to get started with scikit learn
Intermediate knowledge of Python programming and some fundamental knowledge of linear algebra and probability will help

Advances in Financial Machine Learning Marcos Lopez de Prado, 2018-02-02
Learn to understand and implement the latest machine learning innovations to improve your investment performance
Machine learning ML is changing virtually every aspect of our lives
Today ML algorithms accomplish tasks that until recently only expert humans could perform
And finance is ripe for disruptive innovations that will transform how the following generations understand money and invest
In the book readers will learn how to Structure big data in a way that is amenable to ML algorithms
Conduct research with ML algorithms on big data
Use supercomputing methods and back test their discoveries while avoiding false positives
Advances in Financial Machine Learning addresses real life problems faced by practitioners every day and explains scientifically sound solutions using math supported by code and examples
Readers become active users who can test the proposed solutions in their individual setting
Written by a recognized expert and portfolio manager this book will equip investment professionals with the groundbreaking tools needed to succeed in modern finance

Proceedings of International Conference on Information Technology and Applications Sajid Anwar, Abrar Ullah, Álvaro Rocha, Maria José Sousa, 2023-05-18
This book includes high quality papers presented at 16th International Conference on Information Technology and Applications ICITA 2022 held in Lisbon Portugal during October 20 22 2022
The book presents original research work of academics and industry professionals to exchange their knowledge of the state of the art research and development in information technology and applications
The topics covered in the book are cloud computing business process engineering machine learning evolutionary computing big data analytics Internet of things and cyber physical systems information and knowledge management computer vision and image processing computer graphics and games programming mobile computing ontology engineering software and systems modeling human computer interaction online learning e learning computer networks and web engineering

Pattern Recognition Primer Karol Przystalski, Maciej J. Ogorzałek, Jan K. Argasiński, Wiesław Chmielnicki
This textbook provides semester length coverage of pattern recognition classification accessible to everyone who would like to understand how pattern recognition and machine learning works
It explores the most commonly used classification methods in an intelligible way
Unlike other books available for this course this one explains from top to bottom each method with all needed details
Every method described is explained with examples in Python
The presentation is designed to be highly accessible to students from a variety of disciplines with no experience in machine learning
Each chapter contains easy to understand code samples as well as exercises to consolidate and test knowledge

New Trends in Business Information Systems and Technology Rolf Dornberger, 2020-07-07
This book presents selected examples of digitalization

in the age of digital change It is divided into two sections Digital Innovation which features new technologies that stimulate and enable new business opportunities and Digital Business Transformation comprising business and management concepts that employ specific technological solutions for their practical implementation Combining new insights from research teaching and management including digital transformation e business knowledge representation human computer interaction and business optimization the book highlights the breadth of research as well as its meaningful and relevant transfer into practice It is intended for academics seeking inspiration as well as for leaders wanting to tap the potential of the latest trends to take society and their business to the next level

Business Information Systems Witold Abramowicz,Rafael Corchuelo,2019-06-18 The two volume set LNBIP 353 and 354 constitutes the proceedings of the 22nd International Conference on Business Information Systems BIS 2019 held in Seville Spain in June 2019 The theme of the BIS 2019 was Data Science for Business Information Systems inspiring researchers to share theoretical and practical knowledge of the different aspects related to Data Science in enterprises The 67 papers presented in these proceedings were carefully reviewed and selected from 223 submissions The contributions were organized in topical sections as follows Part I Big Data and Data Science Artificial Intelligence ICT Project Management and Smart Infrastructure Part II Social Media and Web based Systems and Applications Evaluations and Experiences

Deep Learning and its Applications using Python Niha Kamal Basha,Surbhi Bhatia Khan,Abhishek Kumar,Arwa Mashat,2023-10-31 This book thoroughly explains deep learning models and how to use Python programming to implement them in applications such as NLP face detection face recognition face analysis and virtual assistance chatbot machine translation etc It provides hands on guidance in using Python for implementing deep learning application models It also identifies future research directions for deep learning

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