Ebook free A first course in machine learning second edition machine learning pattern recognition (Download Only)

Machine Learning, revised and updated edition Introduction to Machine Learning, fourth edition Machine Learning Algorithms Data Mining Machine Learning For Dummies Mastering Machine Learning Algorithms Python Machine Learning By Example Machine Learning with TensorFlow, Second Edition Pythonデータサイエンスハンドブック Python Machine Learning Lifelong Machine Learning Python Machine Learning by Example Machine Learning for Beginners ［第3版］Python機械学習プログラミング 達人データサイエンティストによる理論と実践 Artificial Intelligence Python Machine Learning Cookbook Python Machine Learning Blueprints Machine Learning in Java Fundamentals of Machine Learning for Predictive Data Analytics, second edition TensorFlowで学ぶ機械学習・ニューラルネットワーク Machine Learning Reinforcement Learning, second edition Mastering Machine Learning with R Advances in Machine Learning Research and Application: 2013 Edition Artificial Intelligence By Example Building Machine Learning Systems with Python Machine Learning Practical Machine Learning with R and Python: Second Edition 深層学習 The The Machine Learning Workshop Introduction to Machine Learning, third edition Machine Learning Algorithms for Supervised and Unsupervised Learning Practical Machine Learning with R and Python: Third Edition scikit-learn､Keras､TensorFlowによる実践機械学習 Advances in Machine Learning Research and Application: 2011 Edition Advances in Machine Learning Research and Application: 2012 Edition Machine Learning Foundations of Machine Learning, second edition Data Mining: Practical Machine Learning Tools and Techniques 強化学習

Machine Learning, revised and updated edition 2021-08-17

a concise overview of machine learning computer programs that learn from data the basis of such applications as voice recognition and driverless cars today machine learning underlies a range of applications we use every day from product recommendations to voice recognition as well as some we don t yet use everyday including driverless cars it is the basis for a new approach to artificial intelligence that aims to program computers to use example data or past experience to solve a given problem in this volume in the mit press essential knowledge series ethem alpaydin offers a concise and accessible overview of the new ai this expanded edition offers new material on such challenges facing machine learning as privacy security accountability and bias alpaydin author of a popular textbook on machine learning explains that as big data has gotten bigger the theory of machine learning the foundation of efforts to process that data into knowledge has also advanced he describes the evolution of the field explains important learning algorithms and presents example applications he discusses the use of machine learning algorithms for pattern recognition artificial neural networks inspired by the human brain algorithms that learn associations between instances and reinforcement learning when an autonomous agent learns to take actions to maximize reward in a new chapter he considers transparency explainability and fairness and the ethical and legal implications of making decisions based on data

Introduction to Machine Learning, fourth edition *2020-03-24*

a substantially revised fourth edition of a comprehensive textbook including new coverage of recent advances in deep learning and neural networks the goal of machine learning is to program computers to use example data or past experience to solve a given problem machine learning underlies such exciting new technologies as self driving cars speech recognition and translation applications this substantially revised fourth edition of a comprehensive widely used machine learning textbook offers new coverage of recent advances in the field in both theory and practice including developments in deep learning and neural networks the book covers a broad array of topics not usually included in introductory machine learning texts including supervised learning bayesian decision theory parametric methods semiparametric methods nonparametric methods multivariate analysis hidden markov models reinforcement learning kernel machines graphical models bayesian estimation and statistical testing the fourth edition offers a new chapter on deep learning that discusses training regularizing and structuring deep neural networks such as convolutional and generative adversarial networks new material in the chapter on reinforcement learning that covers the use of deep networks the policy gradient methods and deep reinforcement learning new material in the chapter on multilayer perceptrons on autoencoders and the word2vec network and discussion of a popular method of dimensionality reduction t sne new appendixes offer background material on linear algebra and optimization end of chapter exercises help readers to apply concepts learned introduction to machine learning can be used in courses for advanced undergraduate and graduate students and as a reference for professionals

Machine Learning Algorithms *2018-08-30*

an easy to follow step by step guide for getting to grips with the real world application of machine learning algorithms key features explore statistics and complex mathematics for data intensive applications discover new developments in em algorithm pca and bayesian regression study patterns and make predictions across various datasets book description machine learning has gained tremendous popularity for its powerful and fast predictions with large datasets however the true forces behind its powerful output are the complex algorithms involving substantial statistical analysis that churn large datasets and generate substantial insight this second edition of machine learning algorithms walks you through prominent development outcomes that have taken place relating to machine learning algorithms which constitute major contributions to the machine learning process and help you to strengthen and master statistical interpretation across the areas of supervised semi supervised and reinforcement learning once the core concepts of an algorithm have been covered you ll explore real world examples based on the most diffused libraries such as scikit learn nltk tensorflow and keras you will discover new topics such as principal component analysis pca independent component analysis ica bayesian regression discriminant analysis advanced clustering and gaussian mixture by the end of this book you will have studied machine learning algorithms and be able to put them into production to make your machine learning applications more innovative what you will learn study feature selection and the feature engineering process assess performance and error trade offs for linear regression build a data model and understand how it works by using different types of algorithm learn to tune the parameters of support vector machines svm explore the concept of natural language processing nlp and recommendation systems create a machine learning architecture from scratch who this book is for machine learning algorithms is for you if you are a machine learning engineer data engineer or junior data scientist who wants to advance in the field of predictive analytics and machine learning familiarity with r and python will be an added advantage for getting the best from this book

Data Mining *2016-10-01*

data mining practical machine learning tools and techniques fourth edition offers a thorough grounding in machine learning concepts along with practical advice on applying these tools and techniques in real world data mining situations this highly anticipated fourth edition of the most acclaimed work on data mining and machine learning teaches readers everything they need to know to get going from preparing inputs interpreting outputs evaluating results to the algorithmic methods at the heart of successful data mining approaches extensive updates reflect the technical changes and modernizations that have taken place in the field since the last edition including substantial new chapters on probabilistic methods and on deep learning accompanying the book is a new version of the popular weka machine learning software from the university of waikato authors witten frank hall and pal include today s techniques coupled with the methods at the leading edge of contemporary research please visit the book companion website at cs waikato ac nz ml weka book html it contains powerpoint slides for chapters 1 12 this is a very comprehensive teaching resource with many ppt slides covering each chapter of the book online appendix on the weka workbench again a very comprehensive learning aid for the open source software that goes with the book table of contents highlighting the many new sections in the 4th edition along with reviews of the 1st edition errata etc provides a thorough grounding in machine learning concepts as well as practical advice on applying the tools and techniques to data mining

projects presents concrete tips and techniques for performance improvement that work by transforming the input or output in machine learning methods includes a downloadable weka software toolkit a comprehensive collection of machine learning algorithms for data mining tasks in an easy to use interactive interface includes open access online courses that introduce practical applications of the material in the book

Machine Learning For Dummies 2021-02-09

one of mark cuban s top reads for better understanding a i inc com 2021 your comprehensive entry level guide to machine learning while machine learning expertise doesn t quite mean you can create your own turing test proof android as in the movie ex machina it is a form of artificial intelligence and one of the most exciting technological means of identifying opportunities and solving problems fast and on a large scale anyone who masters the principles of machine learning is mastering a big part of our tech future and opening up incredible new directions in careers that include fraud detection optimizing search results serving real time ads credit scoring building accurate and sophisticated pricing models and way way more unlike most machine learning books the fully updated 2nd edition of machine learning for dummies doesn t assume you have years of experience using programming languages such as python r source is also included in a downloadable form with comments and explanations but lets you in on the ground floor covering the entry level materials that will get you up and running building models you need to perform practical tasks it takes a look at the underlying and fascinating math principles that power machine learning but also shows that you don t need to be a math whiz to build fun new tools and apply them to your work and study understand the history of ai and machine learning work with python 3 8 and tensorflow 2 x and r as a download build and test your own models use the latest datasets rather than the worn out data found in other books apply machine learning to real problems whether you want to learn for college or to enhance your business or career performance this friendly beginner s guide is your best introduction to machine learning allowing you to become quickly confident using this amazing and fast developing technology that s impacting lives for the better all over the world

Mastering Machine Learning Algorithms *2020-01-31*

updated and revised second edition of the bestselling guide to exploring and mastering the most important algorithms for solving complex machine learning problems key featuresupdated to include new algorithms and techniquescode updated to python 3 8 tensorflow 2 x new coverage of regression analysis time series analysis deep learning models and cutting edge applicationsbook description mastering machine learning algorithms second edition helps you harness the real power of machine learning algorithms in order to implement smarter ways of meeting today s overwhelming data needs this newly updated and revised guide will help you master algorithms used widely in semi supervised learning reinforcement learning supervised learning and unsupervised learning domains you will use all the modern libraries from the python ecosystem including numpy and keras to extract features from varied complexities of data ranging from bayesian models to the markov chain monte carlo algorithm to hidden markov models this machine learning book teaches you how to extract features from your dataset perform complex dimensionality reduction and train supervised and semi supervised models by making use of python based libraries such as scikit learn you will also discover practical applications for complex techniques such as maximum likelihood estimation

hebbian learning and ensemble learning and how to use tensorflow 2 x to train effective deep neural networks by the end of this book you will be ready to implement and solve end to end machine learning problems and use case scenarios what you will learnunderstand the characteristics of a machine learning algorithmimplement algorithms from supervised semi supervised unsupervised and rl domainslearn how regression works in time series analysis and risk predictioncreate model and train complex probabilistic models cluster high dimensional data and evaluate model accuracy discover how artificial neural networks work train optimize and validate them work with autoencoders hebbian networks and ganswho this book is for this book is for data science professionals who want to delve into complex ml algorithms to understand how various machine learning models can be built knowledge of python programming is required

Python Machine Learning By Example *2020-10-30*

a comprehensive guide to get you up to speed with the latest developments of practical machine learning with python and upgrade your understanding of machine learning ml algorithms and techniques key featuresdive into machine learning algorithms to solve the complex challenges faced by data scientists todayexplore cutting edge content reflecting deep learning and reinforcement learning developmentsuse updated python libraries such as tensorflow pytorch and scikit learn to track machine learning projects end to endbook description python machine learning by example third edition serves as a comprehensive gateway into the world of machine learning ml with six new chapters on topics including movie recommendation engine development with naïve bayes recognizing faces with support vector machine predicting stock prices with artificial neural networks categorizing images of clothing with convolutional neural networks predicting with sequences using recurring neural networks and leveraging reinforcement learning for making decisions the book has been considerably updated for the latest enterprise requirements at the same time this book provides actionable insights on the key fundamentals of ml with python programming hayden applies his expertise to demonstrate implementations of algorithms in python both from scratch and with libraries each chapter walks through an industry adopted application with the help of realistic examples you will gain an understanding of the mechanics of ml techniques in areas such as exploratory data analysis feature engineering classification regression clustering and nlp by the end of this ml python book you will have gained a broad picture of the ml ecosystem and will be well versed in the best practices of applying ml techniques to solve problems what you will learnunderstand the important concepts in ml and data scienceuse python to explore the world of data mining and analyticsscale up model training using varied data complexities with apache sparkdelve deep into text analysis and nlp using python libraries such nltk and gensimselect and build an ml model and evaluate and optimize its performanceimplement ml algorithms from scratch in python tensorflow 2 pytorch and scikit learnwho this book is for if you re a machine learning enthusiast data analyst or data engineer highly passionate about machine learning and want to begin working on machine learning assignments this book is for you prior knowledge of python coding is assumed and basic familiarity with statistical concepts will be beneficial although this is not necessary

Machine Learning with TensorFlow, Second Edition *2021-02-02*

updated with new code new projects and new chapters machine learning with tensorflow second edition gives readers a solid

foundation in machine learning concepts and the tensorflow library summary updated with new code new projects and new chapters machine learning with tensorflow second edition gives readers a solid foundation in machine learning concepts and the tensorflow library written by nasa jpl deputy cto and principal data scientist chris mattmann all examples are accompanied by downloadable jupyter notebooks for a hands on experience coding tensorflow with python new and revised content expands coverage of core machine learning algorithms and advancements in neural networks such as vgg face facial identification classifiers and deep speech classifiers purchase of the print book includes a free ebook in pdf kindle and epub formats from manning publications about the technology supercharge your data analysis with machine learning ml algorithms automatically improve as they process data so results get better over time you don t have to be a mathematician to use ml tools like google s tensorflow library help with complex calculations so you can focus on getting the answers you need about the book machine learning with tensorflow second edition is a fully revised guide to building machine learning models using python and tensorflow you ll apply core ml concepts to real world challenges such as sentiment analysis text classification and image recognition hands on examples illustrate neural network techniques for deep speech processing facial identification and auto encoding with cifar 10 what s inside machine learning with tensorflow choosing the best ml approaches visualizing algorithms with tensorboard sharing results with collaborators running models in docker about the reader requires intermediate python skills and knowledge of general algebraic concepts like vectors and matrices examples use the super stable 1 15 x branch of tensorflow and tensorflow 2 x about the author chris mattmann is the division manager of the artificial intelligence analytics and innovation organization at nasa jet propulsion lab the first edition of this book was written by nishant shukla with kenneth fricklas table of contents part 1 your machine learning rig 1 a machine learning odyssey 2 tensorflow essentials part 2 core learning algorithms 3 linear regression and beyond 4 using regression for call center volume prediction 5 a gentle introduction to classification 6 sentiment classification large movie review dataset 7 automatically clustering data 8 inferring user activity from android accelerometer data 9 hidden markov models 10 part of speech tagging and word sense disambiguation part 3 the neural network paradigm 11 a peek into autoencoders 12 applying autoencoders the cifar 10 image dataset 13 reinforcement learning 14 convolutional neural networks 15 building a real world cnn vgg face ad vgg face lite 16 recurrent neural networks 17 lstms and automatic speech recognition 18 sequence to sequence models for chatbots 19 utility landscape

Pythonデータサイエンスハンドブック *2018-05*

python のデータサイエンス用のツールを使いこなし 効率よく仕事を進めるための 実用的な情報が詰め込まれたリファレンスです ipython と jupyter numpy pandas matplotlib scikit learn をカバーします それぞれのトピックについて 押さえておくべき基本 tips 便利なコマンドなどを紹介します python でデータの操作 変換 可視化 統計的処理 データモデルの構築 科学計算を行う人にとってはいつも手元に置いておきたい 使える 一冊です

Python Machine Learning *2017-09-20*

unlock modern machine learning and deep learning techniques with python by using the latest cutting edge open source python libraries about this book second edition of the bestselling book on machine learning a practical approach to key frameworks in data science machine learning and deep learning use the most powerful python libraries to implement machine learning and deep learning get to know the best practices to improve and optimize your machine learning systems and algorithms who this

book is for if you know some python and you want to use machine learning and deep learning pick up this book whether you want to start from scratch or extend your machine learning knowledge this is an essential and unmissable resource written for developers and data scientists who want to create practical machine learning and deep learning code this book is ideal for developers and data scientists who want to teach computers how to learn from data what you will learn understand the key frameworks in data science machine learning and deep learning harness the power of the latest python open source libraries in machine learning explore machine learning techniques using challenging real world data master deep neural network implementation using the tensorflow library learn the mechanics of classification algorithms to implement the best tool for the job predict continuous target outcomes using regression analysis uncover hidden patterns and structures in data with clustering delve deeper into textual and social media data using sentiment analysis in detail machine learning is eating the software world and now deep learning is extending machine learning understand and work at the cutting edge of machine learning neural networks and deep learning with this second edition of sebastian raschka s bestselling book python machine learning thoroughly updated using the latest python open source libraries this book offers the practical knowledge and techniques you need to create and contribute to machine learning deep learning and modern data analysis fully extended and modernized python machine learning second edition now includes the popular tensorflow deep learning library the scikit learn code has also been fully updated to include recent improvements and additions to this versatile machine learning library sebastian raschka and vahid mirjalili s unique insight and expertise introduce you to machine learning and deep learning algorithms from scratch and show you how to apply them to practical industry challenges using realistic and interesting examples by the end of the book you ll be ready to meet the new data analysis opportunities in today s world if you ve read the first edition of this book you ll be delighted to find a new balance of classical ideas and modern insights into machine learning every chapter has been critically updated and there are new chapters on key technologies you ll be able to learn and work with tensorflow more deeply than ever before and get essential coverage of the keras neural network library along with the most recent updates to scikit learn style and approach python machine learning second edition takes a practical hands on coding approach so you can learn about machine learning by coding with python this book moves fluently between the theoretical principles of machine learning and the practical details of implementation with python

Lifelong Machine Learning *2018-08-14*

lifelong machine learning second edition is an introduction to an advanced machine learning paradigm that continuously learns by accumulating past knowledge that it then uses in future learning and problem solving in contrast the current dominant machine learning paradigm learns in isolation given a training dataset it runs a machine learning algorithm on the dataset to produce a model that is then used in its intended application it makes no attempt to retain the learned knowledge and use it in subsequent learning unlike this isolated system humans learn effectively with only a few examples precisely because our learning is very knowledge driven the knowledge learned in the past helps us learn new things with little data or effort lifelong learning aims to emulate this capability because without it an ai system cannot be considered truly intelligent research in lifelong learning has developed significantly in the relatively short time since the first edition of this book was published the purpose of this second edition is to expand the definition of lifelong learning update the content of several chapters and add a new chapter about continual learning in deep neural networks which has been actively researched

over the past two or three years a few chapters have also been reorganized to make each of them more coherent for the reader moreover the authors want to propose a unified framework for the research area currently there are several research topics in machine learning that are closely related to lifelong learning most notably multi task learning transfer learning and meta learning because they also employ the idea of knowledge sharing and transfer this book brings all these topics under one roof and discusses their similarities and differences its goal is to introduce this emerging machine learning paradigm and present a comprehensive survey and review of the important research results and latest ideas in the area this book is thus suitable for students researchers and practitioners who are interested in machine learning data mining natural language processing or pattern recognition lecturers can readily use the book for courses in any of these related fields

Python Machine Learning by Example *2019-02-28*

grasp machine learning concepts techniques and algorithms with the help of real world examples using python libraries such as tensorflow and scikit learn key features exploit the power of python to explore the world of data mining and data analytics discover machine learning algorithms to solve complex challenges faced by data scientists today use python libraries such as tensorflow and keras to create smart cognitive actions for your projects book description the surge in interest in machine learning ml is due to the fact that it revolutionizes automation by learning patterns in data and using them to make predictions and decisions if you re interested in ml this book will serve as your entry point to ml python machine learning by example begins with an introduction to important ml concepts and implementations using python libraries each chapter of the book walks you through an industry adopted application you ll implement ml techniques in areas such as exploratory data analysis feature engineering and natural language processing nlp in a clear and easy to follow way with the help of this extended and updated edition you ll understand how to tackle data driven problems and implement your solutions with the powerful yet simple python language and popular python packages and tools such as tensorflow scikit learn gensim and keras to aid your understanding of popular ml algorithms the book covers interesting and easy to follow examples such as news topic modeling and classification spam email detection stock price forecasting and more by the end of the book you ll have put together a broad picture of the ml ecosystem and will be well versed with the best practices of applying ml techniques to make the most out of new opportunities what you will learn understand the important concepts in machine learning and data science use python to explore the world of data mining and analytics scale up model training using varied data complexities with apache spark delve deep into text and nlp using python libraries such nltk and gensim select and build an ml model and evaluate and optimize its performance implement ml algorithms from scratch in python tensorflow and scikit learn who this book is for if you re a machine learning aspirant data analyst or data engineer highly passionate about machine learning and want to begin working on ml assignments this book is for you prior knowledge of python coding is assumed and basic familiarity with statistical concepts will be beneficial although not necessary

Machine Learning for Beginners *2023-10-16*

learn how to build a complete machine learning pipeline by mastering feature extraction feature selection and algorithm training key features develop a solid understanding of foundational principles in machine learning master regression and

classification methods for accurate data prediction and categorization in machine learning dive into advanced machine learning topics including unsupervised learning and deep learning description the second edition of machine learning for beginners addresses key concepts and subjects in machine learning the book begins with an introduction to the foundational principles of machine learning followed by a discussion of data preprocessing it then delves into feature extraction and feature selection providing comprehensive coverage of various techniques such as the fourier transform short time fourier transform and local binary patterns moving on the book discusses principal component analysis and linear discriminant analysis next the book covers the topics of model representation training testing and cross validation it emphasizes regression and classification explaining and implementing methods such as gradient descent essential classification techniques including k nearest neighbors logistic regression and naive bayes are also discussed in detail the book then presents an overview of neural networks including their biological background the limitations of the perceptron and the backpropagation model it also covers support vector machines and kernel methods decision trees and ensemble models are also discussed the final section of the book provides insight into unsupervised learning and deep learning offering readers a comprehensive overview of these advanced topics by the end of the book you will be well prepared to explore and apply machine learning in various real world scenarios what you will learn acquire skills to effectively prepare data for machine learning tasks learn how to implement learning algorithms from scratch harness the power of scikit learn to efficiently implement common algorithms get familiar with various feature selection and feature extraction methods learn how to implement clustering algorithms who this book is for this book is for both undergraduate and postgraduate computer science students as well as professionals looking to transition into the captivating realm of machine learning assuming a foundational familiarity with python table of contents section i fundamentals 1 an introduction to machine learning 2 the beginning data pre processing 3 feature selection 4 feature extraction 5 model development section ii supervised learning 6 regression 7 k nearest neighbors 8 classification logistic regression and naïve bayes classifier 9 neural network i the perceptron 10 neural network ii the multi layer perceptron 11 support vector machines 12 decision trees 13 an introduction to ensemble learning section iii unsupervised learning and deep learning 14 clustering 15 deep learning appendix 1 glossary appendix 2 methods techniques appendix 3 important metrics and formulas appendix 4 visualization matplotlib answers to multiple choice questions bibliography

［第3版］Python機械学習プログラミング 達人データサイエンティストによる理論と実践 *2020-10-22*

本書は 機械学習コンセプト全般をカバーし 理論的背景とpythonコーディングの実際を解説しています 初歩的な線形回帰から始め ディープラーニング cnn rnn 敵対的生成ネットワーク 強化学習などを取り上げ scikit learn やtensorflowなどpythonライブラリの新版を使ってプログラミング 第3版では13 16章の内容をほとんど刷新したほか 敵対的生成ネットワークと強化学習の章を新たに追加 機械学習プログラミングの本格的な理解と実践に向けて大きく飛躍できる一冊です 本書は python machine learning machine learning and deep learning with python scikit learn and tensorflow 2 3rd edition の翻訳書です 微積分 線形代数 python の文法 データ分析用ライブラリについてある程度理解している必要があります 原著の第1版 ドイツ語 韓国語 中国語 日本語 ロシア語 ポーランド語 イタリア語に翻訳 acm 米国計算機学会の 21st annual list of notable books and articles 2016 にランクイン 日本語の第1版 itエンジニア本大賞2017 ベスト10にランクイン 発行 インプレス

Artificial Intelligence *2018-03-12*

the first edition of this popular textbook contemporary artificial intelligence provided an accessible and student friendly

introduction to ai this fully revised and expanded update artificial intelligence with an introduction to machine learning second edition retains the same accessibility and problem solving approach while providing new material and methods the book is divided into five sections that focus on the most useful techniques that have emerged from ai the first section of the book covers logic based methods while the second section focuses on probability based methods emergent intelligence is featured in the third section and explores evolutionary computation and methods based on swarm intelligence the newest section comes next and provides a detailed overview of neural networks and deep learning the final section of the book focuses on natural language understanding suitable for undergraduate and beginning graduate students this class tested textbook provides students and other readers with key ai methods and algorithms for solving challenging problems involving systems that behave intelligently in specialized domains such as medical and software diagnostics financial decision making speech and text recognition genetic analysis and more

Python Machine Learning Cookbook *2019-03-30*

discover powerful ways to effectively solve real world machine learning problems using key libraries including scikit learn tensorflow and pytorch key featureslearn and implement machine learning algorithms in a variety of real life scenarioscover a range of tasks catering to supervised unsupervised and reinforcement learning techniquesfind easy to follow code solutions for tackling common and not so common challengesbook 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 learnuse predictive modeling and apply it to real world problemsexplore data visualization techniques to interact with your datalearn how to build a recommendation engineunderstand how to interact with text data and build models to analyze itwork with speech data and recognize spoken words using hidden markov modelsget well versed with reinforcement learning automated ml and transfer learningwork with image data and build systems for image recognition and biometric face recognitionuse deep neural networks to build an optical character recognition systemwho 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

Python Machine Learning Blueprints 2019-01-31

discover a project based approach to mastering machine learning concepts by applying them to everyday problems using libraries such as scikit learn tensorflow and keras key featuresget to grips with python s machine learning libraries including scikit learn tensorflow and kerasimplement advanced concepts and popular machine learning algorithms in real world projectsbuild analytics computer vision and neural network projects book description machine learning is transforming the way we understand and interact with the world around us this book is the perfect guide for you to put your knowledge and skills into practice and use the python ecosystem to cover key domains in machine learning this second edition covers a range of libraries from the python ecosystem including tensorflow and keras to help you implement real world machine learning projects the book begins by giving you an overview of machine learning with python with the help of complex datasets and optimized techniques you ll go on to understand how to apply advanced concepts and popular machine learning algorithms to real world projects next you ll cover projects from domains such as predictive analytics to analyze the stock market and recommendation systems for github repositories in addition to this you ll also work on projects from the nlp domain to create a custom news feed using frameworks such as scikit learn tensorflow and keras following this you ll learn how to build an advanced chatbot and scale things up using pyspark in the concluding chapters you can look forward to exciting insights into deep learning and you ll even create an application using computer vision and neural networks by the end of this book you ll be able to analyze data seamlessly and make a powerful impact through your projects what you will learnunderstand the python data science stack and commonly used algorithmsbuild a model to forecast the performance of an initial public offering ipo over an initial discrete trading window understand nlp concepts by creating a custom news feedcreate applications that will recommend github repositories based on ones you ve starred watched or forkedgain the skills to build a chatbot from scratch using pysparkdevelop a market prediction app using stock datadelve into advanced concepts such as computer vision neural networks and deep learningwho this book is for this book is for machine learning practitioners data scientists and deep learning enthusiasts who want to take their machine learning skills to the next level by building real world projects the intermediate level guide will help you to implement libraries from the python ecosystem to build a variety of projects addressing various machine learning domains knowledge of python programming and machine learning concepts will be helpful

Machine Learning in Java *2018-11-28*

leverage the power of java and its associated machine learning libraries to build powerful predictive models key featuressolve predictive modeling problems using the most popular machine learning java libraries explore data processing machine learning and nlp concepts using javaml weka mallet librariespractical examples tips and tricks to help you understand applied machine learning in javabook description as the amount of data in the world continues to grow at an almost incomprehensible rate being able to understand and process data is becoming a key differentiator for competitive organizations machine learning applications are everywhere from self driving cars spam detection document search and trading strategies to speech recognition this makes machine learning well suited to the present day era of big data and data science the main challenge is how to transform data into actionable knowledge machine learning in java will provide you with the techniques and tools you need you will start by learning how to apply machine learning methods to a variety of common tasks

including classification prediction forecasting market basket analysis and clustering the code in this book works for jdk 8 and above the code is tested on jdk 11 moving on you will discover how to detect anomalies and fraud and ways to perform activity recognition image recognition and text analysis by the end of the book you will have explored related web resources and technologies that will help you take your learning to the next level by applying the most effective machine learning methods to real world problems you will gain hands on experience that will transform the way you think about data what you will learndiscover key java machine learning librariesimplement concepts such as classification regression and clusteringdevelop a customer retention strategy by predicting likely churn candidatesbuild a scalable recommendation engine with apache mahoutapply machine learning to fraud anomaly and outlier detectionexperiment with deep learning concepts and algorithmswrite your own activity recognition model for ehealth applicationswho this book is for if you want to learn how to use java s machine learning libraries to gain insight from your data this book is for you it will get you up and running quickly and provide you with the skills you need to successfully create customize and deploy machine learning applications with ease you should be familiar with java programming and some basic data mining concepts to make the most of this book but no prior experience with machine learning is required

Fundamentals of Machine Learning for Predictive Data Analytics, second edition *2020-10-20*

the second edition of a comprehensive introduction to machine learning approaches used in predictive data analytics covering both theory and practice machine learning is often used to build predictive models by extracting patterns from large datasets these models are used in predictive data analytics applications including price prediction risk assessment predicting customer behavior and document classification this introductory textbook offers a detailed and focused treatment of the most important machine learning approaches used in predictive data analytics covering both theoretical concepts and practical applications technical and mathematical material is augmented with explanatory worked examples and case studies illustrate the application of these models in the broader business context this second edition covers recent developments in machine learning especially in a new chapter on deep learning and two new chapters that go beyond predictive analytics to cover unsupervised learning and reinforcement learning

TensorFlow□□□□□□□□□□□□□□□□□□□□ *2018-04*

tensorflow□□□□□□□□□□□□□□□□□□□□

Machine Learning *2021-09-16*

concepts of machine learning with practical approaches key features includes real scenario examples to explain the working of machine learning algorithms includes graphical and statistical representation to simplify modeling machine learning and neural networks full of python codes numerous exercises and model question papers for data science students description the

book offers the readers the fundamental concepts of machine learning techniques in a user friendly language the book aims to give in depth knowledge of the different machine learning ml algorithms and the practical implementation of the various ml approaches this book covers different supervised machine learning algorithms such as linear regression model naïve bayes classifier decision tree k nearest neighbor logistic regression support vector machine random forest algorithms unsupervised machine learning algorithms such as k means clustering hierarchical clustering probabilistic clustering association rule mining apriori algorithm f p growth algorithm gaussian mixture model and reinforcement learning algorithm such as markov decision process mdp bellman equations policy evaluation using monte carlo policy iteration and value iteration q learning state action reward state action sarsa it also includes various feature extraction and feature selection techniques the recommender system and a brief overview of deep learning by the end of this book the reader can understand machine learning concepts and easily implement various ml algorithms to real world problems what you will learn perform feature extraction and feature selection techniques learn to select the best machine learning algorithm for a given problem get a stronghold in using popular python libraries like scikit learn pandas and matplotlib practice how to implement different types of machine learning techniques learn about artificial neural network along with the back propagation algorithm make use of various recommended systems with powerful algorithms who this book is for this book is designed for data science and analytics students academicians and researchers who want to explore the concepts of machine learning and practice the understanding of real cases knowing basic statistical and programming concepts would be good although not mandatory table of contents 1 introduction 2 supervised learning algorithms 3 unsupervised learning 4 introduction to the statistical learning theory 5 semi supervised learning and reinforcement learning 6 recommended systems

Reinforcement Learning, second edition *2018-11-13*

the significantly expanded and updated new edition of a widely used text on reinforcement learning one of the most active research areas in artificial intelligence reinforcement learning one of the most active research areas in artificial intelligence is a computational approach to learning whereby an agent tries to maximize the total amount of reward it receives while interacting with a complex uncertain environment in reinforcement learning richard sutton and andrew barto provide a clear and simple account of the field s key ideas and algorithms this second edition has been significantly expanded and updated presenting new topics and updating coverage of other topics like the first edition this second edition focuses on core online learning algorithms with the more mathematical material set off in shaded boxes part i covers as much of reinforcement learning as possible without going beyond the tabular case for which exact solutions can be found many algorithms presented in this part are new to the second edition including ucb expected sarsa and double learning part ii extends these ideas to function approximation with new sections on such topics as artificial neural networks and the fourier basis and offers expanded treatment of off policy learning and policy gradient methods part iii has new chapters on reinforcement learning s relationships to psychology and neuroscience as well as an updated case studies chapter including alphago and alphago zero atari game playing and ibm watson s wagering strategy the final chapter discusses the future societal impacts of reinforcement learning

Mastering Machine Learning with R 2019-01-31

stay updated with expert techniques for solving data analytics and machine learning challenges and gain insights from complex projects and power up your applications key featuresbuild independent machine learning ml systems leveraging the best features of r 3 5understand and apply different machine learning techniques using real world examplesuse methods such as multi class classification regression and clusteringbook description given the growing popularity of the r zerocost statistical programming environment there has never been a better time to start applying ml to your data this book will teach you advanced techniques in ml using the latest code in r 3 5 you will delve into various complex features of supervised learning unsupervised learning and reinforcement learning algorithms to design efficient and powerful ml models this newly updated edition is packed with fresh examples covering a range of tasks from different domains mastering machine learning with r starts by showing you how to quickly manipulate data and prepare it for analysis you will explore simple and complex models and understand how to compare them you ll also learn to use the latest library support such as tensorflow and keras r for performing advanced computations additionally you ll explore complex topics such as natural language processing nlp time series analysis and clustering which will further refine your skills in developing applications each chapter will help you implement advanced ml algorithms using real world examples you ll even be introduced to reinforcement learning along with its various use cases and models in the concluding chapters you ll get a glimpse into how some of these blackbox models can be diagnosed and understood by the end of this book you ll be equipped with the skills to deploy ml techniques in your own projects or at work what you will learnprepare data for machine learning methods with easeunderstand how to write production ready code and package it for useproduce simple and effective data visualizations for improved insightsmaster advanced methods such as boosted trees and deep neural networksuse natural language processing to extract insights in relation to textimplement tree based classifiers including random forest and boosted treewho this book is for this book is for data science professionals machine learning engineers or anyone who is looking for the ideal guide to help them implement advanced machine learning algorithms the book will help you take your skills to the next level and advance further in this field working knowledge of machine learning with r is mandatory

Advances in Machine Learning Research and Application: 2013 Edition *2013-06-21*

advances in machine learning research and application 2013 edition is a scholarlyeditions book that delivers timely authoritative and comprehensive information about artificial intelligence the editors have built advances in machine learning research and application 2013 edition on the vast information databases of scholarlynews you can expect the information about artificial intelligence in this book to be deeper than what you can access anywhere else as well as consistently reliable authoritative informed and relevant the content of advances in machine learning research and application 2013 edition has been produced by the world s leading scientists engineers analysts research institutions and companies all of the content is from peer reviewed sources and all of it is written assembled and edited by the editors at scholarlyeditions and available exclusively from us you now have a source you can cite with authority confidence and credibility more information is available at scholarlyeditions com

Artificial Intelligence By Example *2020-02-28*

understand the fundamentals and develop your own ai solutions in this updated edition packed with many new examples key featuresai based examples to guide you in designing and implementing machine intelligencebuild machine intelligence from scratch using artificial intelligence examplesdevelop machine intelligence from scratch using real artificial intelligencebook description ai has the potential to replicate humans in every field artificial intelligence by example second edition serves as a starting point for you to understand how ai is built with the help of intriguing and exciting examples this book will make you an adaptive thinker and help you apply concepts to real world scenarios using some of the most interesting ai examples right from computer programs such as a simple chess engine to cognitive chatbots you will learn how to tackle the machine you are competing with you will study some of the most advanced machine learning models understand how to apply ai to blockchain and internet of things iot and develop emotional quotient in chatbots using neural networks such as recurrent neural networks rnns and convolutional neural networks cnns this edition also has new examples for hybrid neural networks combining reinforcement learning rl and deep learning dl chained algorithms combining unsupervised learning with decision trees random forests combining dl and genetic algorithms conversational user interfaces cui for chatbots neuromorphic computing and quantum computing by the end of this book you will understand the fundamentals of ai and have worked through a number of examples that will help you develop your ai solutions what you will learnapply k nearest neighbors knn to language translations and explore the opportunities in google translateunderstand chained algorithms combining unsupervised learning with decision treessolve the xor problem with feedforward neural networks fnn and build its architecture to represent a data flow graphlearn about meta learning models with hybrid neural networkscreate a chatbot and optimize its emotional intelligence deficiencies with tools such as small talk and data loggingbuilding conversational user interfaces cui for chatbotswriting genetic algorithms that optimize deep learning neural networksbuild quantum computing circuitswho this book is for developers and those interested in ai who want to understand the fundamentals of artificial intelligence and implement them practically prior experience with python programming and statistical knowledge is essential to make the most out of this book

Building Machine Learning Systems with Python *2018-07-31*

get more from your data by creating practical machine learning systems with python key features develop your own python based machine learning system discover how python offers multiple algorithms for modern machine learning systems explore key python machine learning libraries to implement in your projects book description machine learning allows systems to learn things without being explicitly programmed to do so python is one of the most popular languages used to develop machine learning applications which take advantage of its extensive library support this third edition of building machine learning systems with python addresses recent developments in the field by covering the most used datasets and libraries to help you build practical machine learning systems using machine learning to gain deeper insights from data is a key skill required by modern application developers and analysts alike python being a dynamic language allows for fast exploration and experimentation this book shows you exactly how to find patterns in your raw data you will start by brushing up on your python machine learning knowledge and being introduced to libraries you ll quickly get to grips with serious real world projects on datasets

using modeling and creating recommendation systems with building machine learning systems with python you ll gain the tools and understanding required to build your own systems all tailored to solve real world data analysis problems by the end of this book you will be able to build machine learning systems using techniques and methodologies such as classification sentiment analysis computer vision reinforcement learning and neural networks what you will learn build a classification system that can be applied to text images and sound employ amazon services aws to run analysis on the cloud solve problems related to regression using scikit learn and tensorflow recommend products to users based on their past purchases understand different ways to apply deep neural networks on structured data address recent developments in the field of computer vision and reinforcement learning who this book is for building machine learning systems with python is for data scientists machine learning developers and python developers who want to learn how to build increasingly complex machine learning systems you will use python s machine learning capabilities to develop effective solutions prior knowledge of python programming is expected

Machine Learning *2014-10-08*

a proven hands on approach for students without a strong statistical foundationsince the best selling first edition was published there have been several prominent developments in the field of machine learning including the increasing work on the statistical interpretations of machine learning algorithms unfortunately computer science students

Practical Machine Learning with R and Python: Second Edition *2018-05-30*

this is the 2nd edition of the book this 2nd edition includes more content detailed code comments and better formatting for readbility this book implements many common machine learning algorithms in equivalent r and python the book touches on r and python implementations of different regression models classification algorithms including logistic regression knn classification svms b splines random forest boosting etc other techniques like best fit forward fit backward fit and lasso and ridge regression are also covered the book further touches on classification metrics for computing accuracy recall precision etc there are implementations of validation roc and auc curves in both r and python finally the book covers unsupervised learning methods like k means pca and hierarchical clustering the book is well suited for the novice and the expert the first two chapters discuss the most important programming constructs in r and python the third chapter highlights equivalent programming phrases in r and python hence those with no knowledge of r and python will find these introductory chapters useful those who are proficient in one of the language can further their knowledge on the other those are familiar with both r and python will find the equivalent implementations useful to internalize the algorithms this book should serve as a useful and handy reference for machine learning algorithms in both r and python

[illegible] *2015-04-07*

[illegible] sgd [illegible] cnn rnn [illegible]

The The Machine Learning Workshop *2020-07-22*

take a comprehensive and step by step approach to understanding machine learning key featuresdiscover how to apply the scikit learn uniform api in all types of machine learning modelsunderstand the difference between supervised and unsupervised learning modelsreinforce your understanding of machine learning concepts by working on real world examplesbook description machine learning algorithms are an integral part of almost all modern applications to make the learning process faster and more accurate you need a tool flexible and powerful enough to help you build machine learning algorithms quickly and easily with the machine learning workshop you ll master the scikit learn library and become proficient in developing clever machine learning algorithms the machine learning workshop begins by demonstrating how unsupervised and supervised learning algorithms work by analyzing a real world dataset of wholesale customers once you ve got to grips with the basics you ll develop an artificial neural network using scikit learn and then improve its performance by fine tuning hyperparameters towards the end of the workshop you ll study the dataset of a bank s marketing activities and build machine learning models that can list clients who are likely to subscribe to a term deposit you ll also learn how to compare these models and select the optimal one by the end of the machine learning workshop you ll not only have learned the difference between supervised and unsupervised models and their applications in the real world but you ll also have developed the skills required to get started with programming your very own machine learning algorithms what you will learnunderstand how to select an algorithm that best fits your dataset and desired outcomeexplore popular real world algorithms such as k means mean shift and dbscandiscover different approaches to solve machine learning classification problemsdevelop neural network structures using the scikit learn packageuse the nn algorithm to create models for predicting future outcomesperform error analysis to improve your model s performancewho this book is for the machine learning workshop is perfect for machine learning beginners you will need python programming experience though no prior knowledge of scikit learn and machine learning is necessary

Introduction to Machine Learning, third edition 2014-08-22

a substantially revised third edition of a comprehensive textbook that covers a broad range of topics not often included in introductory texts the goal of machine learning is to program computers to use example data or past experience to solve a given problem many successful applications of machine learning exist already including systems that analyze past sales data to predict customer behavior optimize robot behavior so that a task can be completed using minimum resources and extract knowledge from bioinformatics data introduction to machine learning is a comprehensive textbook on the subject covering a broad array of topics not usually included in introductory machine learning texts subjects include supervised learning bayesian decision theory parametric semi parametric and nonparametric methods multivariate analysis hidden markov models reinforcement learning kernel machines graphical models bayesian estimation and statistical testing machine learning is rapidly becoming a skill that computer science students must master before graduation the third edition of introduction to machine learning reflects this shift with added support for beginners including selected solutions for exercises and additional example data sets with code available online other substantial changes include discussions of outlier detection ranking algorithms for perceptrons and support vector machines matrix decomposition and spectral methods distance estimation new kernel algorithms deep learning in multilayered perceptrons and the nonparametric approach to bayesian methods all

learning algorithms are explained so that students can easily move from the equations in the book to a computer program the book can be used by both advanced undergraduates and graduate students it will also be of interest to professionals who are concerned with the application of machine learning methods

Machine Learning Algorithms for Supervised and Unsupervised Learning 2018-03-06

machine learning second edition i listened carefully to feedback from customers for my original book and revamped this new edition i m excited to present you the second edition with various high quality diagrams explanations extensive information and so much more value packed within what you ll learn supervised learning unsupervised learning reinforced learning algorithms decision tree random forest and much much more don t miss out on this opportunity to expand your knowledge base with the second edition of my original machine learning book in the artificial intelligence series other books easily retail for 50 100 and have far less quality content this book is by far superior and exceeds any other book available make the greatest investment in yourself by investing in your knowledge buy now note for the best visual experience of diagrams it is highly recommend you purchase the paperback version

Practical Machine Learning with R and Python: Third Edition 2019

this is the 3rd edition of the book all the code sections are formatted with fixed width font consolas for better readability this book implements many common machine learning algorithms in equivalent r and python the book touches on r and python implementations of different regression models classification algorithms including logistic regression knn classification svms b splines random forest boosting etc other techniques like best fit forward fit backward fit and lasso and ridge regression are also covered the book further touches on classification metrics for computing accuracy recall precision etc there are implementations of validation roc and auc curves in both r and python finally the book covers unsupervised learning methods like k means pca and hierarchical clustering the book is well suited for the novice and the expert the first two chapters discuss the most important programming constructs in r and python the third chapter highlights equivalent programming phrases in r and python hence those with no knowledge of r and python will find these introductory chapters useful those who are proficient in one of the language can further their knowledge on the other those are familiar with both r and python will find the equivalent implementations useful to internalize the algorithms this book should serve as a useful and handy reference for machine learning algorithms in both r and python

scikit-learn、Keras、TensorFlowによる□□□□□□□□□ 2020-10

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Advances in Machine Learning Research and Application: 2011 Edition *2012-01-09*

advances in machine learning research and application 2011 edition is a scholarlyeditions ebook that delivers timely authoritative and comprehensive information about machine learning the editors have built advances in machine learning research and application 2011 edition on the vast information databases of scholarlynews you can expect the information about machine learning in this ebook to be deeper than what you can access anywhere else as well as consistently reliable authoritative informed and relevant the content of advances in machine learning research and application 2011 edition has been produced by the world s leading scientists engineers analysts research institutions and companies all of the content is from peer reviewed sources and all of it is written assembled and edited by the editors at scholarlyeditions and available exclusively from us you now have a source you can cite with authority confidence and credibility more information is available at scholarlyeditions com

Advances in Machine Learning Research and Application: 2012 Edition *2012-12-26*

advances in machine learning research and application 2012 edition is a scholarlyeditions ebook that delivers timely authoritative and comprehensive information about machine learning the editors have built advances in machine learning research and application 2012 edition on the vast information databases of scholarlynews you can expect the information about machine learning in this ebook to be deeper than what you can access anywhere else as well as consistently reliable authoritative informed and relevant the content of advances in machine learning research and application 2012 edition has been produced by the world s leading scientists engineers analysts research institutions and companies all of the content is from peer reviewed sources and all of it is written assembled and edited by the editors at scholarlyeditions and available exclusively from us you now have a source you can cite with authority confidence and credibility more information is available at scholarlyeditions com

Machine Learning *2020-02-19*

machine learning a bayesian and optimization perspective 2nd edition gives a unified perspective on machine learning by covering both pillars of supervised learning namely regression and classification the book starts with the basics including mean square least squares and maximum likelihood methods ridge regression bayesian decision theory classification logistic regression and decision trees it then progresses to more recent techniques covering sparse modelling methods learning in reproducing kernel hilbert spaces and support vector machines bayesian inference with a focus on the em algorithm and its approximate inference variational versions monte carlo methods probabilistic graphical models focusing on bayesian networks hidden markov models and particle filtering dimensionality reduction and latent variables modelling are also considered in depth this palette of techniques concludes with an extended chapter on neural networks and deep learning architectures the book also covers the fundamentals of statistical parameter estimation wiener and kalman filtering convexity and convex optimization including a chapter on stochastic approximation and the gradient descent family of algorithms presenting related online learning techniques as well as concepts and algorithmic versions for distributed optimization focusing on the physical

reasoning behind the mathematics without sacrificing rigor all the various methods and techniques are explained in depth supported by examples and problems giving an invaluable resource to the student and researcher for understanding and applying machine learning concepts most of the chapters include typical case studies and computer exercises both in matlab and python the chapters are written to be as self contained as possible making the text suitable for different courses pattern recognition statistical adaptive signal processing statistical bayesian learning as well as courses on sparse modeling deep learning and probabilistic graphical models new to this edition complete re write of the chapter on neural networks and deep learning to reflect the latest advances since the 1st edition the chapter starting from the basic perceptron and feed forward neural networks concepts now presents an in depth treatment of deep networks including recent optimization algorithms batch normalization regularization techniques such as the dropout method convolutional neural networks recurrent neural networks attention mechanisms adversarial examples and training capsule networks and generative architectures such as restricted boltzman machines rbms variational autoencoders and generative adversarial networks gans expanded treatment of bayesian learning to include nonparametric bayesian methods with a focus on the chinese restaurant and the indian buffet processes presents the physical reasoning mathematical modeling and algorithmic implementation of each method updates on the latest trends including sparsity convex analysis and optimization online distributed algorithms learning in rkh spaces bayesian inference graphical and hidden markov models particle filtering deep learning dictionary learning and latent variables modeling provides case studies on a variety of topics including protein folding prediction optical character recognition text authorship identification fmri data analysis change point detection hyperspectral image unmixing target localization and more

Foundations of Machine Learning, second edition 2018-12-25

a new edition of a graduate level machine learning textbook that focuses on the analysis and theory of algorithms this book is a general introduction to machine learning that can serve as a textbook for graduate students and a reference for researchers it covers fundamental modern topics in machine learning while providing the theoretical basis and conceptual tools needed for the discussion and justification of algorithms it also describes several key aspects of the application of these algorithms the authors aim to present novel theoretical tools and concepts while giving concise proofs even for relatively advanced topics foundations of machine learning is unique in its focus on the analysis and theory of algorithms the first four chapters lay the theoretical foundation for what follows subsequent chapters are mostly self contained topics covered include the probably approximately correct pac learning framework generalization bounds based on rademacher complexity and vc dimension support vector machines svms kernel methods boosting on line learning multi class classification ranking regression algorithmic stability dimensionality reduction learning automata and languages and reinforcement learning each chapter ends with a set of exercises appendixes provide additional material including concise probability review this second edition offers three new chapters on model selection maximum entropy models and conditional entropy models new material in the appendixes includes a major section on fenchel duality expanded coverage of concentration inequalities and an entirely new entry on information theory more than half of the exercises are new to this edition

Data Mining: Practical Machine Learning Tools and Techniques *2011-01-20*

data mining practical machine learning tools and techniques third edition offers a thorough grounding in machine learning concepts as well as practical advice on applying machine learning tools and techniques in real world data mining situations this highly anticipated third edition of the most acclaimed work on data mining and machine learning will teach you everything you need to know about preparing inputs interpreting outputs evaluating results and the algorithmic methods at the heart of successful data mining thorough updates reflect the technical changes and modernizations that have taken place in the field since the last edition including new material on data transformations ensemble learning massive data sets multi instance learning plus a new version of the popular weka machine learning software developed by the authors witten frank and hall include both tried and true techniques of today as well as methods at the leading edge of contemporary research the book is targeted at information systems practitioners programmers consultants developers information technology managers specification writers data analysts data modelers database r d professionals data warehouse engineers data mining professionals the book will also be useful for professors and students of upper level undergraduate and graduate level data mining and machine learning courses who want to incorporate data mining as part of their data management knowledge base and expertise provides a thorough grounding in machine learning concepts as well as practical advice on applying the tools and techniques to your data mining projects offers concrete tips and techniques for performance improvement that work by transforming the input or output in machine learning methods includes downloadable weka software toolkit a collection of machine learning algorithms for data mining tasks in an updated interactive interface algorithms in toolkit cover data pre processing classification regression clustering association rules visualization

強化学習 *2019-05-23*

理論は裏切らない 強化学習で必要になる数理を広くカバーした 一貫したていねいな解説なので じっくり読める 付録 参考文献も充実 ベルマン方程式 td学習 方策勾配 pomdp 深層強化学習をより深く おもな内容 第1章 準備 1 1 強化学習とは 1 2 マルコフ決定過程と逐次的意思決定問題 1 3 方策 1 4 逐次的意思決定問題の定式化 第2章 プランニング 2 1 準備 2 2 動的計画法 2 3 動的計画法による解法 2 4 線形計画法による解法 第3章 探索と活用のトレードオフ 3 1 概要 3 2 探索と活用のトレードオフ 3 3 方策モデル 第4章 モデルフリー型の強化学習 4 1 データにもとづく意思決定 4 2 価値関数の推定 4 3 方策と行動価値関数の学習 4 4 収束性 4 5 アクター クリティック法 第5章 モデルベース型の強化学習 5 1 問題設定の整理 5 2 環境推定 5 3 ブラックボックス生成モデルに対するプランニング 5 4 オンラインのモデルベース型強化学習 第6章 関数近似を用いた強化学習 6 1 概要 6 2 価値関数の関数近似 6 3 方策の関数近似 第7章 部分観測マルコフ決定過程 7 1 部分観測マルコフ決定過程 pomdp の基礎 7 2 pomdp のプランニング 7 3 pomdp の学習 第8章 最近の話題 8 1 分布強化学習 8 2 深層強化 学習付録a 補足a 1 証明 a 2 ノルム a 3 線形計画法 a 4 自然勾配法の補足