Data Science In Python Volume 3 Plots And Charts With Matplotlib Data Analysis With Python And Sqlite

This book provides the state-of-the-art intelligent methods and techniques for solving real-world problems along with a vision of the future research. The fifth 2020 Future Technologies Conference was organized virtually and received a total of 590 submissions from academic pioneering researchers, scientists, industrial engineers, and students from all over the world. The submitted papers covered a wide range of important topics including but not limited to computing, electronics, artificial intelligence, robotics, security and communications and their applications to the real world. After a double-blind peer review process, 210 submissions (including 6 poster papers) have been selected to be included in these proceedings. One of the meaningful and valuable dimensions of this conference is the way it brings together a large group of technology geniuses in one venue to not only present breakthrough research in future technologies, but also to promote discussions and debate of relevant issues, challenges, opportunities and research findings. The authors hope that readers find the book interesting, exciting and inspiring

Python Data Science Essentials, Third Edition provides modern insight in setting up and performing data science operations effectively using the latest python tools and libraries. It builds faster governance on the most essential tasks such as data munging and pre-processing, along with all the techniques you require.

The book provides a one-stop solution for getting into data science with Python and teaches how to extract insights from data. This book on data visualization is the eighth in a planned series of books that examine key topics (e.g., learner modeling, instructional strategies, authoring, domain modeling, assessment, team tutoring, self-improving systems, data visualization, and competency based scenario design) in intelligent tutoring system (ITS) design. This book focuses on data visualization and how it is applied in ITSs. The chapters within this book specifically examine topics in relationship to the Generalized Intelligent Framework for Tutoring (GIFT) (Sottilare, Brawner, Goldberg & Holden, 2012; Sottilare, Brawner, Sinatra, & Johnston, 2017). GIFT is an open-source, domain-independent, modular, service-oriented architecture for ITSs. The design of GIFT allows for reusability, reduction in authoring time, and reducing the skill level needed to create an ITS. GIFT provides functionality to create ITSs, distribute ITSs to learners through the Cloud, conduct research to evaluate ITSs, and to examine instructional outcomes. Data visualization is an important topic for ITSs, as there are many different users of the systems (including learners, instructors, researchers, subject matter experts). The data that is collected by the ITS can be organized and displayed in a number of different ways. The current book includes a general discussion of how data visualizations can be applied in ITSs, as well as detailed specific examples of existing implementations, and technical details related to incorporating data visualization in ITSs. We believe this book can be used as a design tool for data visualization interfaces in ITSs.

A Tour of Data Science: Learn R and Python in Parallel covers the fundamentals of data science, including programming, statistics, optimization, and machine learning in a single short book. It does not cover everything, but rather, teaches the key concepts and topics in Data Science. It also covers two of the most popular programming languages used in Data Science, R and Python, in one source. Key features: Allows you to learn R and Python in parallel Cover statistics, programming, optimization and predictive modelling, and the popular data manipulation tools – data.table and pandas Provides a concise and accessible presentation Includes machine learning algorithms implemented from scratch, linear regression, lasso, ridge, logistic regression, gradient boosting trees, etc. Appealing to data scientists, statisticians, quantitative analysts, and others who want to learn programming with R and Python from a data science perspective.

Are you thinking about learning how to use the Python programming language? Thinking about getting started on a programming career? Are you thinking about learning data science? This book is for you!

Mathematicians have skills that, if deepened in the right ways, would enable them to use data to answer questions important to them and others, and report those answers in compelling ways. Data science combines parts of mathematics, statistics, computer science. Gaining such power and the ability to teach has reinvigorated the careers of mathematicians. This handbook will assist mathematicians to better understand the opportunities presented by data science. As it applies to the curriculum, research, and career opportunities, data science is a fast-growing field. Contributors from both academics and industry present their views on these opportunities and how to advantage them.

Here's the Perfect Solution if You Want to Become the Master of Data Science and Learn Phyton Step-by-Step Would you like to: Learn a super competitive skill? Become irreplaceable in the future job market? Upgrade yourself to the ultimate data whizz? If so, then keep reading! Data science is one of the emerging technologies that is set to radically transform the job market. With applications in almost every industry, data science experts will have no shortage of great job offers. But, the whole field may seem a little intimidating if your background is not specific to data science. This book is here to guide you through the field of data science from the very beginning. You will learn the fundamental skills and tools to support your learning process. If you're a beginner, this is the book to help you easily understand the basics of data science. To understand data science, you also need a good understanding of how Python helps you design and implement these projects. This guidebook is going to explain how we can get all of this done. Here just a little preview of what you'll find inside this book: A thorough and simple explanation of data science and the way it works Basics of data science and fundamental skills you need to get started Data science libraries you need to learn to become a data whizz A blueprint for the most used frameworks for Python data science How to process and understand the data and design your own projects AND SO MUCH MORE! Even if you're an absolute beginner with little programming experience, you will find this book easy to follow and implement. This guide is your first step towards a successful data science career, so don't hesitate! Scroll Up, Click the "Buy Now with 1-Click", and Get Your Copy!

Are you interested to get into the programming world? Do you want to learn and understand Python and Machine Learning? Python Machine Learning for Beginners is the guide for you. Python Machine Learning for Beginners is the ultimate guide for beginners looking to learn and understand how Python programming works. Python Machine Learning for Beginners is split up into easy to learn chapters that will help guide the readers through the early stages of Python programming. It's this thought out and systematic approach to learning which makes Python Machine Learning for Beginners such a sought-after resource for those that want to learn about Python programming and about Machine Learning using an object-oriented programming approach. Inside Python Machine Learning for Beginners you will discover: An introduction to Machine Learning The main concepts of Machine Learning The basics of Python for

beginners Machine Learning with Python Data Processing, Analysis, and Visualizations Case studies and much more! Throughout the book, you will learn the basic concepts behind Python programming which is designed to introduce you to Python programming. You will learn about getting started, the keywords and statements, data types and type conversion. Along with different examples, there are also exercises to help ensure that the information sinks in. You will find this book an invaluable tool for starting and mastering Machine Learning using Python. Once you complete Python Machine Learning for Beginners, you will be more than prepared to take on any Python programming. Scroll back up to the top of this page and hit BUY IT NOW to get your copy of Python Machine Learning for Beginners! You won't regret it!

The Handbook of Computational Social Science is a comprehensive reference source for scholars across multiple disciplines. It outlines key debates in the field, showcasing novel statistical modeling and machine learning methods, and draws from specific case studies to demonstrate the opportunities and challenges in CSS approaches. The Handbook is divided into two volumes written by outstanding, internationally renowned scholars in the field. This second volume focuses on foundations and advances in data science, statistical modeling, and machine learning. It covers a range of key issues, including the management of big data in terms of record linkage, streaming, and missing data. Machine learning, agent-based and statistical modeling, as well as data quality in relation to digital trace and textual data, as well as probability, non-probability, and crowdsourced samples represent further foci. The volume not only makes major contributions to the consolidation of this growing research field, but also encourages growth into new directions. With its broad coverage of perspectives (theoretical, methodological, computational), international scope, and interdisciplinary approach, this important resource is integral reading for advanced undergraduates, postgraduates, and researchers engaging with computational methods across the social sciences, as well as those within the scientific and engineering sectors.

This book is a guide for you on how to use Pandas and Numpy in Python programming language for data analysis. The author begins by helping you familiarize yourself with the basics of data science, Numpy and Pandas. You are guided on how to work with Numpy arrays and how to manipulate them. The various operations that you can perform on your data via the Pandas library have been discussed. You will also know how to create various data structures in Pandas for data storage. Data from the environment is dirty. The process of cleaning such data has been discussed. This involves handling outliers, missing values etc. The author guides you on how to work with data in various types of storage formats. Examples include MS Excel, CSV files, JSON, etc. You are also guided on how to calculate various measures for your data. The process of visualizing data has been explored in detail. About this book: Getting Started with Python for Data Science Working with Numpy Working with Pandas Cleansing Data Working with CSV Data Working with XLS Data Data Wrangling Measures of Central Tendency Calculating Variance Normal Distribution Working with JSON Data Data Visualization Tags: data science with python, python, pandas programming, numpy, pandas, pandas python, pandas in python, numpy in python, numpy python, numpy pandas, data science, ms excel books, json, python for data science, pivot tables, excel pivot tables, data visualisation, data visualisation python, data visualisation for dummies, data visualisation excel, algorithms for data science.

Data Science Applications using Python and R is the second book in a series that began in 2018. This volume is dedicated to text analytics and natural language processing. Using real data, the author leads the reader through the analysis of Tweet sentiment analysis, banking product-group complaint analysis, presidential debate analysis, and more. The book covers text mining, natural language processing (NLP), vectorizing text data, discrete classifiers, bag-of-words (BOW) models, sentiment analysis, and Latent Dirichlet Allocation (LDA). The book offers complete Python and R code with detail explanations. It is designed for use with Jupyter Notebook and R Studio. It also includes notes on Python and R markdown and features full color graphics and text on heavy paper. All data sets used in the book are downloadable from GitHub. Some data can also be customized and download ed from the Federal Consumer Complaint Data Catalog. Finally, each chapter contains practice exercises.

Data Science Crash Course for Beginners with Python Data Science is here to stay. The tremendous growth in the volume, velocity, and variety of data has a substantial impact on every aspect of a business. While data continues to grow exponentially, accuracy remains a problem. This is where data scientists play a decisive role. A data scientist analyzes data, discovers new insights, paints a picture, and creates a vision. And a competent data scientist will provide a business with the competitive edge it needs and address pressing business problems. Data Science Crash Course for Beginners with Python presents you with a hands-on approach to learn data science fast. How Is This Book Different? Every book by AI Publishing has been carefully crafted. This book lays equal emphasis on the theoretical sections as well as the practical aspects of data science. Each chapter provides the theoretical background behind the numerous data science techniques, and practical examples explain the working of these techniques. In the Further Reading section of each chapter, you will find the links to informative data science posts. This book presents you with the tools and packages you need to kick-start data science projects to resolve problems of practical nature. Special emphasis is laid on the main stages of a data science pipeline--data acquisition, data preparation, exploratory data analysis, data modeling and evaluation, and interpretation of the results. In the Data Science Resources section, links to data science resources, articles, interviews, and data science newsletters are provided. The author has also put together a list of contests and competitions that you can try on your own. Another added benefit of buying this book is you get instant access to all the learning material presented with this book-- PDFs, Python codes, exercises, and references--on the publisher's website. They will not cost you an extra cent. The datasets used in this book can be downloaded at runtime, or accessed via the Resources/Datasets folder. The author simplifies your learning by holding your hand through everything. The step by step description of the installation of the software you need for implementing the various data science techniques in this book is guaranteed to make your learning easier. So, right from the beginning, you can experiment with the practical

aspects of data science. You'll also find the quick course on Python programming in the second and third chapters immensely helpful, especially if you are new to Python. This book gives you access to all the codes and datasets. So, access to a computer with the internet is sufficient to get started. The topics covered include: Introduction to Data Science and Decision Making Python Installation and Libraries for Data Science Review of Python for Data Science Data Acquisition Data Preparation (Preprocessing) Exploratory Data Analysis Data Modeling and Evaluation Using Machine Learning Interpretation and Reporting of Findings Data Science Projects Key Insights and Further Avenues Click the BUY button to start your Data Science journey.

Machine learning (ML) is changing virtually every aspect of our lives. Today ML algorithms accomplish tasks that until recently only expert humans could perform. As it relates to finance, this is the most exciting time to adopt a disruptive technology that will transform how everyone invests for generations. Readers will learn how to structure Big data in a way that is amenable to ML algorithms; how to conduct research with ML algorithms on that data; how to use supercomputing methods; how to backtest your discoveries while avoiding false positives. The book addresses real-life problems faced by practitioners on a daily basis, and explains scientifically sound solutions using math, supported by code and examples. Readers become active users who can test the proposed solutions in their particular 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.

With exponentially increasing amounts of data accumulating in real-time, there is no reason why one should not turn data into a competitive advantage. While machine learning, driven by advancements in artificial intelligence, has made great strides, it has not been able to surpass a number of challenges that still prevail in the way of better success. Such limitations as the lack of better methods, deeper understanding of problems, and advanced tools are hindering progress. Challenges and Applications of Data Analytics in Social Perspectives provides innovative insights into the prevailing challenges in data analytics and its application on social media and focuses on various machine learning and deep learning techniques in improving practice and research. The content within this publication examines topics that include collaborative filtering, data visualization, and edge computing. It provides research ideal for data scientists, data analysts, IT specialists, website designers, e-commerce professionals, government officials, software engineers, social media analysts, industry professionals, academicians, researchers, and students.

This book covers a wide range of important topics including but not limited to Technology Trends, Computing, Artificial Intelligence, Machine Vision, Communication, Security, e-Learning, and Ambient Intelligence and their applications to the real world. The sixth Future Technologies Conference 2021 was organized virtually and received a total of 531 submissions from academic pioneering researchers, scientists, industrial engineers, and students from all over the world. After a double-blind peer review process, 191 submissions have been selected to be included in these proceedings. One of the meaningful and valuable dimensions of this conference is the way it brings together a large group of technology geniuses in one venue to not only present breakthrough research in future technologies, but also to promote discussions and debate of relevant issues, challenges, opportunities and research findings. We hope that readers find the book interesting, exciting, and inspiring; it provides the state-of-the-art intelligent methods and techniques for solving real-world problems along with a vision of the future research.

Are you looking for a super-fast computer programming course? Would you like to learn the Python Programming Language in 7 days? Do you want to increase your business thanks to the web applications? If so, keep reading: this bundle book is for you! Finally on launch the most complete Python guide with 3 Manuscripts in 1 book: 1-Python for beginners 2-Python for Data Science 4-Python Crash Course Python will introduce you many selected practices for coding . You will discover as a beginner the world of data science, machine learning and artificial intelligence. The following list is just a tiny fraction of what you will learn in this collection bundle. 1) Python for beginners ? The basics of Python programming ? Differences among programming languages ? Vba, SQL, R, Python ? Game creation with Pyhton ? Easy-to-follow steps for reading and writing codes. ? Control flow statements and Error handling ? 4 best strategies with NumPy, Pandas, Matplotlib 2) Python for Data science ? 4 reason why Python is fundamental for Data Science ? Python design patterns ? How to use Python Data Analysis in your business ? Data visualization optimal tools and techniques ? Analysis of popular Python projects templates ? How to set up the Python environment for Data Science ? Most important Machine Learning Algorithms ? How to leverage Data Science in the Cloud 3) Python Crash Course * A Proven Method to Write your First Program in 7 Days * 5 Common Mistakes to Avoid when You Start Coding * A Simple Strategy to Write Clean, Understandable and Flexible Codes * The One Thing You Need to Debug your Codes in Python * 5 Practical exercises to start programming Even if you have never written a programming code before, you will quickly grasp the basics thanks to visual charts and guidelines for coding. Examples and step-by-step guides will guide you during the code-writing learning process. The description of each topic is crystal-clear and you can easily practice with related exercises. You will also learn all the best tricks of writing codes with point by point descriptions of the code elements. If you really wish to to learn Python and master its language, please click the BUY NOW button.

Introduction to Data Science and Machine Learning has been created with the goal to provide beginners seeking to learn about data science, data enthusiasts, and experienced data professionals with a deep understanding of data science application development using open-source programming from start to finish. This book is divided into four sections: the first section contains an introduction to the book, the second covers the field of data science, software development, and open-source based embedded hardware; the third section covers algorithms that are the decision engines for data science applications; and the final section brings together the concepts shared in the first three sections and provides several examples of data science applications.

The Handbook of Computational Social Science is a comprehensive reference source for scholars across multiple

disciplines. It outlines key debates in the field, showcasing novel statistical modeling and machine learning methods, and draws from specific case studies to demonstrate the opportunities and challenges in CSS approaches. The Handbook is divided into two volumes written by outstanding, internationally renowned scholars in the field. This first volume focuses on the scope of computational social science, ethics, and case studies. It covers a range of key issues, including open science, formal modeling, and the social and behavioral sciences. This volume explores major debates, introduces digital trace data, reviews the changing survey landscape, and presents novel examples of computational social science research on sensing social interaction, social robots, bots, sentiment, manipulation, and extremism in social media. The volume not only makes major contributions to the consolidation of this growing research field but also encourages growth in new directions. With its broad coverage of perspectives (theoretical, methodological, computational), international scope, and interdisciplinary approach, this important resource is integral reading for advanced undergraduates, postgraduates, and researchers engaging with computational methods across the social sciences, as well as those within the scientifi c and engineering sectors.

Learn Docker "infrastructure as code" technology to define a system for performing standard but non-trivial data tasks on medium- to large-scale data sets, using Jupyter as the master controller. It is not uncommon for a real-world data set to fail to be easily managed. The set may not fit well into access memory or may require prohibitively long processing. These are significant challenges to skilled software engineers and they can render the standard Jupyter system unusable. As a solution to this problem, Docker for Data Science proposes using Docker. You will learn how to use existing pre-compiled public images created by the major open-source technologies—Python, Jupyter, Postgres—as well as using the Dockerfile to extend these images to suit your specific purposes. The Docker-Compose technology is examined and you will learn how it can be used to build a linked system with Python churning data behind the scenes and Jupyter managing these background tasks. Best practices in using existing images are explored as well as developing your own images to deploy state-of-the-art machine learning and optimization algorithms. What You'll Learn Master interactive development using the Jupyter platform Run and build Docker containers from scratch and from publicly available open-source images Write infrastructure as code using the docker-compose tool and its docker-compose.yml file type Deploy a multi-service data science application across a cloud-based system Who This Book Is For Data scientists, machine learning engineers, artificial intelligence researchers, Kagglers, and software developers

A perfect introduction to the exploding field of Data Science for the curious, first-time student. The author brings his trademark conversational tone to the important pillars of the discipline: exploratory data analysis, choices for structuring data, causality, machine learning principles, and introductory Python programming using open-source Jupyter Notebooks. This engaging read will allow any dedicated learner to build the skills necessary to contribute to the Data Science revolution, regardless of background.

Data science libraries, frameworks, modules, and toolkits are great for doing data science, but they're also a good way to dive into the discipline without actually understanding data science. In this book, you'll learn how many of the most fundamental data science tools and algorithms work by implementing them from scratch. If you have an aptitude for mathematics and some programming skills, author Joel Grus will help you get comfortable with the math and statistics at the core of data science, and with hacking skills you need to get started as a data scientist. Today's messy glut of data holds answers to questions no one's even thought to ask. This book provides you with the know-how to dig those answers out. Get a crash course in Python Learn the basics of linear algebra, statistics, and probability—and understand how and when they're used in data science Collect, explore, clean, munge, and manipulate data Dive into the fundamentals of machine learning Implement models such as k-nearest Neighbors, Naive Bayes, linear and logistic regression, decision trees, neural networks, and clustering Explore recommender systems, natural language processing, network analysis, MapReduce, and databases

Treading on Python is designed to bring developers and others who are anxious to learn Python up to speed quickly. Not only does it teach the basics of syntax, but it condenses years of experience. You will learn warts, gotchas, best practices and hints that have been gleaned through the years in days. You will hit the ground running and running in the right way.

Advanced Data Science and Analytics with Python enables data scientists to continue developing their skills and apply them in business as well as academic settings. The subjects discussed in this book are complementary and a follow-up to the topics discussed in Data Science and Analytics with Python. The aim is to cover important advanced areas in data science using tools developed in Python such as SciKit-learn, Pandas, Numpy, Beautiful Soup, NLTK, NetworkX and others. The model development is supported by the use of frameworks such as Keras, TensorFlow and Core ML, as well as Swift for the development of iOS and MacOS applications. Features: Targets readers with a background in programming, who are interested in the tools used in data analytics and data science Uses Python throughout Presents tools, alongside solved examples, with steps that the reader can easily reproduce and adapt to their needs Focuses on the practical use of the tools rather than on lengthy explanations Provides the reader with the opportunity to use the book whenever needed rather than following a sequential path The book can be read independently from the previous volume and each of the chapters in this volume is sufficiently independent from the others, providing flexibility for the reader. Each of the topics addressed in the book tackles the data science workflow from a practical perspective, concentrating on the process and results obtained. The implementation and deployment of trained models are central to the book. Time series analysis, natural language processing, topic modelling, social network analysis, neural networks and deep learning are comprehensively covered. The book discusses the need to develop data products and addresses the subject of bringing models to their intended audiences – in this case, literally to the users' fingertips in the form of an iPhone app. About the Author Dr. Jesús Rogel-Salazar is a lead data scientist in the field, working for companies such as Tympa Health Technologies, Barclays, AKQA, IBM Data Science Studio and Dow Jones. He is a visiting researcher at the

Department of Physics at Imperial College London, UK and a member of the School of Physics, Astronomy and Mathematics at the University of Hertfordshire, UK.

The Book has been written completely as per AICTE recommended syllabus on "Data Sciences". SALIENT FEATURES OF THE BOOK: Explains how data is collected, managed and stored for data science. With complete courseware for understand the key concepts in data science including their real-world applications and the toolkit used by data scientists. Implement data collection and management. Provided with state of the arts subjectwise. With all required tutorials on R, Python and Bokeh, Anaconda, IBM SPSS-21 and Matplotlib.

Unleash the power of Python and its robust data science capabilities About This Book Unleash the power of Python 3 objects Learn to use powerful Python libraries for effective data processing and analysis Harness the power of Python to analyze data and create insightful predictive models Unlock deeper insights into machine learning with this vital guide to cutting-edge predictive analytics Who This Book Is For Entry-level analysts who want to enter in the data science world will find this course very useful to get themselves acquainted with Python's data science capabilities for doing real-world data analysis. What You Will Learn Install and setup Python Implement objects in Python by creating classes and defining methods Get acquainted with NumPy to use it with arrays and array-oriented computing in data analysis Create effective visualizations for presenting your data using Matplotlib Process and analyze data using the time series capabilities of pandas Interact with different kind of database systems, such as file, disk format, Mongo, and Redis Apply data mining concepts to real-world problems Compute on big data, including real-time data from the Internet Explore how to use different machine learning models to ask different questions of your data In Detail The Python: Real-World Data Science course will take you on a journey to become an efficient data science practitioner by thoroughly understanding the key concepts of Python. This learning path is divided into four modules and each module are a mini course in their own right, and as you complete each one, you'll have gained key skills and be ready for the material in the next module. The course begins with getting your Python fundamentals nailed down. After getting familiar with Python core concepts, it's time that you dive into the field of data science. In the second module, you'll learn how to perform data analysis using Python in a practical and example-driven way. The third module will teach you how to design and develop data mining applications using a variety of datasets, starting with basic classification and affinity analysis to more complex data types including text, images, and graphs. Machine learning and predictive analytics have become the most important approaches to uncover data gold mines. In the final module, we'll discuss the necessary details regarding machine learning concepts, offering intuitive yet informative explanations on how machine learning algorithms work, how to use them, and most importantly, how to avoid the common pitfalls. Style and approach This course includes all the resources that will help you jump into the data science field with Python and learn how to make sense of data. The aim is to create a smooth learning path that will teach you how to get started with powerful Python libraries and perform various data science techniques in depth.

The Crystal Ball Instruction Manual, Volume One

Become A Data Science Expert With Python! In our modern time, the amount of data grows exponentially. Over time, we learn to extract important information out of this data by analyzing it. We use data science to analyze share prices, the weather, demographics or to create powerful artificial intelligences. Every modern and big system has to deal with tremendous amounts of data that need to be managed and analyzed intelligently. It is very important to educate yourself in this area as much as possible. Otherwise you might get overrun by this fast-growing industry instead of being part of it. In this third volume of The Python Bible series you will learn how to analyze, manage and visualize big data sets in an effective way. You will get to know powerful libraries like Pandas, Matplotlib and NumPy. At the end, you will be able to write advanced data science applications in Python. Also, you have the perfect transition into the next volume, which is about machine learning. After Reading This Book You Will Have The Following Skills: Analyzing and Processing Big Data Statistical Calculations with Python Visualization of Datasets Plotting Statistical Graphs in Python (Histograms, Boxplot etc.) 3D Plotting and Visualization Working with NumPy, Matplotlib and Pandas Sorting, Joining and Merging data frames Querying data out of data frames Become A Big Data Python Expert With This Book!

Data Science for COVID-19 presents leading-edge research on data science techniques for the detection, mitigation, treatment and elimination of COVID-19. Sections provide an introduction to data science for COVID-19 research, considering past and future pandemics, as well as related Coronavirus variations. Other chapters cover a wide range of Data Science applications concerning COVID-19 research, including Image Analysis and Data Processing, Geoprocessing and tracking, Predictive Systems, Design Cognition, mobile technology, and telemedicine solutions. The book then covers Artificial Intelligence-based solutions, innovative treatment methods, and public safety. Finally, readers will learn about applications of Big Data and new data models for mitigation. Provides a leading-edge survey of Data Science techniques and methods for research, mitigation and treatment of the COVID-19 virus Integrates various Data Science techniques to provide a resource for COVID-19 researchers and clinicians around the world, including both positive and negative research findings Provides insights into innovative data-oriented modeling and predictive techniques from COVID-19 researchers Includes real-world feedback and user experiences from physicians and medical staff from around the world on the effectiveness of applied Data Science solutions

Build the foundational data science skills necessary to work with and better understand complex data science algorithms. This example-driven book provides complete Python coding examples to complement and clarify data science concepts, and enrich the learning experience. Coding examples include visualizations whenever appropriate. The book is a necessary precursor to applying and implementing machine learning algorithms. The book is self-contained. All of the math, statistics, stochastic, and programming skills required to master the content are covered. In-depth knowledge of object-oriented programming isn't required because complete examples are provided and explained. Data Science Fundamentals with Python and MongoDB is an excellent starting point for those interested in pursuing a career in data science. Like any science, the fundamentals of data science are a prerequisite to competency. Without proficiency in mathematics, statistics, data manipulation, and coding, the path to success is "rocky" at best. The coding examples in this book are concise, accurate, and complete, and perfectly complement the data science concepts introduced. What You'll Learn Prepare for a career in data science Work with complex data structures in Python Simulate with Monte Carlo and Stochastic algorithms Apply linear algebra using vectors and matrices Utilize complex algorithms such as gradient descent and principal component analysis Wrangle, cleanse, visualize, and problem solve with data Use MongoDB and JSON to work with data Who This Book Is For The novice yearning to break into the data science world, and the enthusiast looking to enrich, deepen, and develop data science skills through mastering the underlying fundamentals that are

sometimes skipped over in the rush to be productive. Some knowledge of object-oriented programming will make learning easier. Portfolio Management in Practice, Volume 1: Investment Management delivers a comprehensive overview of investment management for students and industry professionals. As the first volume in the CFA Institute's new Portfolio Management in Practice series, Investment Management offers professionals looking to enhance their skillsets and students building foundational knowledge an essential understanding of key investment management concepts. Designed to be an accessible resource for a wide range of learners, this volume explores the full portfolio management process. Inside, readers will find detailed coverage of: Forming capital market expectations Principles of the asset allocation process Determining investment strategies within each asset class Integrating considerations specific to high net worth individuals or institutions into chosen strategies And more To apply the concepts outlined in the Investment Management volume, explore the accompanying Portfolio Management in Practice, Volume 1: Investment Management Workbook. The perfect companion resource, this workbook aligns chapter-by-chapter with Investment Management for easy referencing so readers can draw connections between theoretical content and challenging practice problems. Featuring contributions from the CFA Institute's subject matter experts, Portfolio Management in Practice, Volume 1: Investment Management distills the knowledge forward-thinking professionals will need to succeed in today's fast-paced financial world.

The term data science has gained a lot of popularity recently. The subject is of immense importance to people handling online projects. Data science not only improves business handling skills and easy ways of gaining popularity, but it also improves your skill set in programming. If you want to be a part of data science, then you will require nothing more than some knowledge in mathematics and computing segments like programming languages. Python is a high-level language in the world of computing and programming, which works with data science.We have covered everything you need to know regarding Data Science, Analytics, and Metrics with Python. You will find the various aspects of data science covered in this book with the detailed steps on a data science project. You'll learn the Pandas library, DataFrames, and series along with practical real-life examples to help you understand Data Science in a better and easier manner.Topics like Data Munging, Distribution Analysis, Variable Analysis, Anaconda Setup, Importing Dataset, and Developing Models will help give you insights about Python programming. We also included how to use Matplotlib in Python for Data Metrics. Demos are provided so that you can understand Metrics in Python in a practical manner. Special attention has been given to Counters, Gauges, and Histograms for calculating the metrics in Python.Finally, we also have a chapter on building a predictive model in Python with detailed steps including Logistic Regression, Decision Tree, Data Prediction, and Data Analysis. So, what are you waiting for! Click the BUY NOW button and get your copy now.

Data Science and Analytics with Python is designed for practitioners in data science and data analytics in both academic and business environments. The aim is to present the reader with the main concepts used in data science using tools developed in Python, such as SciKit-learn, Pandas, Numpy, and others. The use of Python is of particular interest, given its recent popularity in the data science community. The book can be used by seasoned programmers and newcomers alike. The book is organized in a way that individual chapters are sufficiently independent from each other so that the reader is comfortable using the contents as a reference. The book discusses what data science and analytics are, from the point of view of the process and results obtained. Important features of Python are also covered, including a Python primer. The basic elements of machine learning, pattern recognition, and artificial intelligence that underpin the algorithms and implementations used in the rest of the book also appear in the first part of the book. Regression analysis using Python, clustering techniques, and classification algorithms are covered in the second part of the book. Hierarchical clustering, decision trees, and ensemble techniques are also explored, along with dimensionality reduction techniques and recommendation systems. The support vector machine algorithm and the Kernel trick are discussed in the last part of the book. About the Author Dr. Jesús Rogel-Salazar is a Lead Data scientist with experience in the field working for companies such as AKQA, IBM Data Science Studio, Dow Jones and others. He is a visiting researcher at the Department of Physics at Imperial College London, UK and a member of the School of Physics, Astronomy and Mathematics at the University of Hertfordshire, UK, He obtained his doctorate in physics at Imperial College London for work on quantum atom optics and ultra-cold matter. He has held a position as senior lecturer in mathematics as well as a consultant in the financial industry since 2006. He is the author of the book Essential Matlab and Octave, also published by CRC Press. His interests include mathematical modelling, data science, and optimization in a wide range of applications including optics, quantum mechanics, data journalism, and finance.

The one-stop resource for all your Python queries Powerful and flexible, Python is one of the most popular programming languages in the world. It's got all the right stuff for the software driving the cutting-edge of the development world—machine learning, robotics, artificial intelligence, data science, etc. The good news is that it's also pretty straightforward to learn, with a simplified syntax, natural-language flow, and an amazingly supportive user community. The latest edition of Python All-in-One For Dummies gives you an inside look at the exciting possibilities offered in the Python world and provides a springboard to launch yourself into wherever you want your coding career to take you. These 7 straightforward and friendly mini-books assume the reader is a beginning programmer, and cover everything from the basic elements of Python code to introductions to the specific applications where you'll use it. Intended as a hands-on reference, the focus is on practice over theory, providing you with examples to follow as well as code for you to copy and start modifying in the "real world"—helping you get up and running in your area of interest almost right away. This means you'll be finishing off your first app or building and remote-controlling your own robot much faster than you can believe. Get a thorough grounding in the language basics Learn how the syntax is applied in high-profile industries Apply Python to projects in enterprise Find out how Python can get you into hot careers in AI, big data, and more Whether you're a newbie coder or just want to add Python to your magic box of tricks, this is the perfect, practical introduction—and one you'll return to as you grow your career.

"This book introduces you to R, RStudio, and the tidyverse, a collection of R packages designed to work together to make data science fast, fluent, and fun. Suitable for readers with no previous programming experience"--

For many researchers, Python is a first-class tool mainly because of its libraries for storing, manipulating, and gaining insight from data. Several resources exist for individual pieces of this data science stack, but only with the Python Data Science Handbook do you get them all—IPython, NumPy, Pandas, Matplotlib, Scikit-Learn, and other related tools. Working scientists and data crunchers familiar with reading and writing Python code will find this comprehensive desk reference ideal for tackling day-to-day issues: manipulating, transforming, and cleaning data; visualizing different types of data; and using data to build statistical or machine

learning models. Quite simply, this is the must-have reference for scientific computing in Python. With this handbook, you'll learn how to use: IPython and Jupyter: provide computational environments for data scientists using Python NumPy: includes the ndarray for efficient storage and manipulation of dense data arrays in Python Pandas: features the DataFrame for efficient storage and manipulation of labeled/columnar data in Python Matplotlib: includes capabilities for a flexible range of data visualizations in Python Scikit-Learn: for efficient and clean Python implementations of the most important and established machine learning algorithms

Go from messy, unstructured artifacts stored in SQL and NoSQL databases to a neat, well-organized dataset with this quick reference for the busy data scientist. Understand text mining, machine learning, and network analysis; process numeric data with the NumPy and Pandas modules; describe and analyze data using statistical and network-theoretical methods; and see actual examples of data analysis at work. This one-stop solution covers the essential data science you need in Python. Data science is one of the fastest-growing disciplines in terms of academic research, student enrollment, and employment. Python, with its flexibility and scalability, is quickly overtaking the R language for data-scientific projects. Keep Python data-science concepts at your fingertips with this modular, quick reference to the tools used to acquire, clean, analyze, and store data. This one-stop solution covers essential Python, databases, network analysis, natural language processing, elements of machine learning, and visualization. Access structured and unstructured text and numeric data from local files, databases, and the Internet. Arrange, rearrange, and clean the data. Work with relational and non-relational databases, data visualization, and simple predictive analysis (regressions, clustering, and decision trees). See how typical data analysis problems are handled. And try your hand at your own solutions to a variety of medium-scale projects that are fun to work on and look good on your resume. Keep this handy quick guide at your side whether you're a student, an entry-level data science professional converting from R to Python, or a seasoned Python developer who doesn't want to memorize every function and option. What You Need: You need a decent distribution of Python 3.3 or above that includes at least NLTK, Pandas, NumPy, Matplotlib, Networkx, SciKit-Learn, and BeautifulSoup. A great distribution that meets the requirements is Anaconda, available for free from www.continuum.io. If you plan to set up your own database servers, you also need MySQL (www.mysql.com) and MongoDB (www.mongodb.com). Both packages are free and run on Windows, Linux, and Mac OS.

Data Analytics With Python Data is the foundation of this digital age that we live in. With this book, you are going to learn how to organize and analyze data and how to interpret vast sources of information. This book covers various topics on data analytics such as data analytics applications, data analytics process, using Python for data analytics, Python libraries for data analytics and many other that will help you kick-start your data analytics journey from the very beginning. In this book you are going to learn how to use Python its tools in order to interpret data and examine those interesting data trends and information, which are important in predicting the future. Whether you are dealing with some medical data, sales data, web page data, you can use Python in order to interpret data, analyze it and obtain this valuable information. You can also use this data for creating data analytics models and predictions. Here Is A Brief Preview of What You'll Learn In This Book… -Data analytics applications -Data analytics process -How to install and run Python -Python data structures and Python libraries -Python conditional construct and iteration -Data exploration using Pandas -Pandas series and dataframes -Data munging and distribution analysis -Carrying out binary operations -Data manipulation and categorical variable analysis -How to build a predictive model -And of course much, much more! Get this book NOW and learn more about Data Analytics With Python!

Get complete instructions for manipulating, processing, cleaning, and crunching datasets in Python. Updated for Python 3.6, the second edition of this hands-on guide is packed with practical case studies that show you how to solve a broad set of data analysis problems effectively. You'll learn the latest versions of pandas, NumPy, IPython, and Jupyter in the process. Written by Wes McKinney, the creator of the Python pandas project, this book is a practical, modern introduction to data science tools in Python. It's ideal for analysts new to Python and for Python programmers new to data science and scientific computing. Data files and related material are available on GitHub. Use the IPython shell and Jupyter notebook for exploratory computing Learn basic and advanced features in NumPy (Numerical Python) Get started with data analysis tools in the pandas library Use flexible tools to load, clean, transform, merge, and reshape data Create informative visualizations with matplotlib Apply the pandas groupby facility to slice, dice, and summarize datasets Analyze and manipulate regular and irregular time series data Learn how to solve real-world data analysis problems with thorough, detailed examples

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