Machine Learning A Hands On Project Based Introdu

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Machine Learning with Python for Everyone - Mark Fenner 2019-07-30 The Complete Beginner's Guide to Understanding and Building Machine Learning Systems with Python Machine Learning with Python for Everyone will help you master the processes, patterns, and strategies you need to build effective learning systems, even if you're an absolute beginner. If you can write some Python code, this book is for you, no matter how little college-level math you know. Principal instructor Mark E. Fenner relies on plain-English stories, pictures, and Python

examples to communicate the ideas of machine learning. Mark begins by discussing machine learning and what it can do; introducing key mathematical and computational topics in an approachable manner; and walking you through the first steps in building, training, and evaluating learning systems. Step by step, you'll fill out the components of a practical learning system, broaden your toolbox, and explore some of the field's most sophisticated and exciting techniques. Whether you're a student, analyst, scientist, or hobbyist, this guide's insights will be applicable to every learning system you ever build or use. Understand machine learning algorithms, models, and core machine learning concepts Classify examples with classifiers, and quantify examples with regressors Realistically assess performance of machine learning systems Use feature engineering to smooth rough data into useful forms Chain multiple components into one system and tune its performance Apply machine learning techniques to images and text Connect the core concepts to neural networks and graphical models Leverage the Python scikit-learn library and other powerful tools Register your book for convenient access to downloads, updates, and/or corrections as they become available. See inside book for details.

Python for Data Science - Erick Thompson 2020-11-10 Are you looking for a crash course that will help you learn Python? Do you want to master data science using Python? If yes, then keep reading! Python is one of the most popular programming languages in the word in 2020 and specially for data science. Every day people use it to do cool things like Automation, they use it in Artificial Intelligence, Machine Learning, as well as Building Applications and Websites like Instagram and Dropbox. YouTube, Pinterest, and SurveyMonkey are all built on Python. So if you are looking

for a trendy job, like data scientist, Python is for you. This is a Python guide with 2 Books in 1: Python crash course Python for data analysis Python has seen an explosion in popularity in recent years, driven by several aspects that make it an incredibly versatile and intuitive language. Moreover, data analysis plays a significant job in numerous parts of your regular day to day existence today. Organizations use information to Understand Their Customer Needs and produce the Best Possible Product or Service. Python Programming Language is one of the best framework with regards to information examination. Data Scientist is the most requested job of the 21st century and Python is the most popular programming language of the 21st century. So it's pretty obvious that anyone have skills in both Data Science and Python will be in great demand in industry. You needn't bother with an exhausting and costly reading material. This guide is the best one for every readers. This guide covers: The world of data science technologies Application of machine learning Data scientist: the sexiest job in the 21st century Learning Python from scratch Data analysis with Python NumPy for numerical data processing Data visualization with Python Projects on Python And much more! Despite its simplicity, Python is also sturdy and robust enough to carry out complex scientific and mathematical tasks. Python has been designed with features that drastically simplify the visualization and analysis of data, and Python is also the go-to choice for the creation of machine learning models and artificial intelligence. Be it machine learning, data analytics, data processing, web development, enterprise software development or taking the photo of Blackhole: Python is everywhere. Beloved by the data scientists and new generation developers, Pyhton will eat the word! Ready to get started? Click the BUY NOW button!

Makeology - Kylie Peppler

2016-05-20
Makeology introduces the emerging landscape of the Maker Movement and its connection to interest-driven learning. While the movement is fueled in part by new tools, technologies, and online communities available to today's makers, its simultaneous emphasis on engaging the world through design and sharing with others harkens back to early educational predecessors including Froebel, Dewey, Montessori, and Papert. Makerspaces as Learning Environments (Volume 1) focuses on making in a variety of educational ecosystems, spanning nursery schools, K-12 environments, higher education, museums, and after-school spaces. Each chapter closes with a set of practical takeaways for educators, researchers, and parents.
Python Projects for Beginners - Connor P. Milliken 2019-11-15 Immerse yourself in learning Python and introductory data analytics with this book's project-based approach.

Through the structure of a ten-week coding bootcamp course, you'll learn key concepts and gain hands-on experience through weekly projects. Each chapter in this book is presented as a full week of topics, with Monday through Thursday covering specific concepts, leading up to Friday, when you are challenged to create a project using the skills learned throughout the week. Topics include Python basics and essential intermediate concepts such as list comprehension, generators and iterators, understanding algorithmic complexity, and data analysis with pandas. From beginning to end, this book builds up your abilities through exercises and challenges, culminating in your solid understanding of Python. Challenge yourself with the intensity of a coding bootcamp experience or learn at your own pace. With this hands-on learning approach, you will gain the skills you need to jumpstart a new career in programming or further your current one as a software

developer. What You Will Learn Understand beginning and more advanced concepts of the Python languageBe introduced to data analysis using pandas, the Python Data Analysis libraryWalk through the process of interviewing and answering technical questionsCreate real-world applications with the Python languageLearn how to use Anaconda, Jupyter Notebooks, and the Python Shell Who This Book Is For Those trying to jumpstart a new career into programming, and those already in the software development industry and would like to learn Python programming.

Python Machine Learning - Brady Ellison
Ready to discover the Machine Learning world? Machine learning paves the path into the future and it's powered by Python. All industries can benefit from machine learning and artificial intelligence whether we're talking about private businesses, healthcare, infrastructure, banking, or social media. What exactly does it do for us and what does a machine learning specialist do? Machine learning professionals create and implement special algorithms that can learn from existing data to make an accurate prediction on new never before seen data. Python Machine Learning presents you a step-by-step guide on how to create machine learning models that lead to valuable results. The book focuses on machine learning theory as much as practical examples. You will learn how to analyse data, use visualization methods, implement regression and classification models, and how to harness the power of neural networks. By purchasing this book, your machine learning journey becomes a lot easier. While a minimal level of Python programming is recommended, the algorithms and techniques are explained in such a way that you don't need to be intimidated by mathematics. The Topics Covered Include: Machine learning fundamentals How to set up the development environment How to use

Python libraries and modules like Scikit-learn, TensorFlow, Matplotlib, and NumPy How to explore data How to solve regression and classification problems Decision trees k-means clustering Feed-forward and recurrent neural networks Get your copy now

Practical Deep Learning at Scale with MLflow - Yong Liu 2022-07-08
Train, test, run, track, store, tune, deploy, and explain provenance-aware deep learning models and pipelines at scale with reproducibility using MLflow Key FeaturesFocus on deep learning models and MLflow to develop practical business AI solutions at scaleShip deep learning pipelines from experimentation to production with provenance trackingLearn to train, run, tune and deploy deep learning pipelines with explainability and reproducibilityBook Description The book starts with an overview of the deep learning (DL) life cycle and the emerging Machine Learning Ops (MLOps) field, providing a clear picture of the four pillars of deep learning: data, model, code, and explainability and the role of MLflow in these areas. From there onward, it guides you step by step in understanding the concept of MLflow experiments and usage patterns, using MLflow as a unified framework to track DL data, code and pipelines, models, parameters, and metrics at scale. You'll also tackle running DL pipelines in a distributed execution environment with reproducibility and provenance tracking, and tuning DL models through hyperparameter optimization (HPO) with Ray Tune, Optuna, and HyperBand. As you progress, you'll learn how to build a multi-step DL inference pipeline with preprocessing and postprocessing steps, deploy a DL inference pipeline for production using Ray Serve and AWS SageMaker, and finally create a DL explanation as a service (EaaS) using the popular Shapley Additive Explanations (SHAP) toolbox. By the end of this book, you'll

have built the foundation and gained the hands-on experience you need to develop a DL pipeline solution from initial offline experimentation to final deployment and production, all within a reproducible and open source framework. What you will learnUnderstand MLOps and deep learning life cycle developmentTrack deep learning models, code, data, parameters, and metricsBuild, deploy, and run deep learning model pipelines anywhereRun hyperparameter optimization at scale to tune deep learning modelsBuild production-grade multi-step deep learning inference pipelinesImplement scalable deep learning explainability as a serviceDeploy deep learning batch and streaming inference servicesShip practical NLP solutions from experimentation to productionWho this book is for This book is for machine learning practitioners including data scientists, data engineers, ML engineers, and scientists who want to build scalable full life cycle deep learning pipelines with reproducibility and provenance tracking using MLflow. A basic understanding of data science and machine learning is necessary to grasp the concepts presented in this book.

Interpretable Machine Learning - Christoph Molnar 2020
This book is about making machine learning models and their decisions interpretable. After exploring the concepts of interpretability, you will learn about simple, interpretable models such as decision trees, decision rules and linear regression. Later chapters focus on general model-agnostic methods for interpreting black box models like feature importance and accumulated local effects and explaining individual predictions with Shapley values and LIME. All interpretation methods are explained in depth and discussed critically. How do they work under the hood? What are their strengths and weaknesses? How can their outputs be interpreted? This book will enable you to select

and correctly apply the interpretation method that is most suitable for your machine learning project.

Python for Software Design - Allen Downey 2009-03-09 Python for Software Design is a concise introduction to software design using the Python programming language. The focus is on the programming process, with special emphasis on debugging. The book includes a wide range of exercises, from short examples to substantial projects, so that students have ample opportunity to practice each new concept.

Machine Learning for Data Streams - Albert Bifet 2018-03-16 A hands-on approach to tasks and techniques in data stream mining and real-time analytics, with examples in MOA, a popular freely available open-source software framework. Today many information sources—including sensor networks, financial markets, social networks, and healthcare monitoring—are so-called data streams, arriving sequentially and at high speed. Analysis must take place in real time, with partial data and without the capacity to store the entire data set. This book presents algorithms and techniques used in data stream mining and real-time analytics. Taking a hands-on approach, the book demonstrates the techniques using MOA (Massive Online Analysis), a popular, freely available open-source software framework, allowing readers to try out the techniques after reading the explanations. The book first offers a brief introduction to the topic, covering big data mining, basic methodologies for mining data streams, and a simple example of MOA. More detailed discussions follow, with chapters on sketching techniques, change, classification, ensemble methods, regression, clustering, and frequent pattern mining. Most of these chapters include exercises, an MOA-based lab session, or both. Finally, the book discusses the MOA software, covering the MOA graphical

user interface, the command line, use of its API, and the development of new methods within MOA. The book will be an essential reference for readers who want to use data stream mining as a tool, researchers in innovation or data stream mining, and programmers who want to create new algorithms for MOA.

Learning Analytics in Education - David Niemi 2018-08-01
This book provides a comprehensive introduction by an extraordinary range of experts to the recent and rapidly developing field of learning analytics. Some of the finest current thinkers about ways to interpret and benefit from the increasing amount of evidence from learners' experiences have taken time to explain their methods, describe examples, and point out new underpinnings for the field. Together, they show how this new field has the potential to dramatically increase learner success through deeper understanding of the academic, social-emotional, motivational, identity and meta-cognitive context each learner uniquely brings. Learning analytics is much more than "analyzing learning data"—it is about deeply understanding what learning activities work well, for whom, and when. Learning Analytics in Education provides an essential framework, as well as guidance and examples, for a wide range of professionals interested in the future of learning. If you are already involved in learning analytics, or otherwise trying to use an increasing density of evidence to understand learners' progress, these leading thinkers in the field may give you new insights. If you are engaged in teaching at any level, or training future teachers/faculty for this new, increasingly technology-enhanced learning world, and want some sense of the potential opportunities (and pitfalls) of what technology can bring to your teaching and students, these forward-thinking leaders can spark your imagination. If you are involved

in research around uses of technology, improving learning measurements, better ways to use evidence to improve learning, or in more deeply understanding human learning itself, you will find additional ideas and insights from some of the best thinkers in the field here. If you are involved in making administrative or policy decisions about learning, you will find new ideas (and dilemmas) coming your way from inevitable changes in how we design and deliver instruction, how we measure the outcomes, and how we provide feedback to students, teachers, developers, administrators, and policy-makers. For all these players, the trick will be to get the most out of all the new developments to efficiently and effectively improve learning performance, without getting distracted by "shiny" technologies that are disconnected from how human learning and development actually work.

Python Crash Course - Eric Matthes 2015-11-01

Python Crash Course is a fast-paced, thorough introduction to Python that will have you writing programs, solving problems, and making things that work in no time. In the first half of the book, you'll learn about basic programming concepts, such as lists, dictionaries, classes, and loops, and practice writing clean and readable code with exercises for each topic. You'll also learn how to make your programs interactive and how to test your code safely before adding it to a project. In the second half of the book, you'll put your new knowledge into practice with three substantial projects: a Space Invaders–inspired arcade game, data visualizations with Python's super-handy libraries, and a simple web app you can deploy online. As you work through Python Crash Course you'll learn how to: –Use powerful Python libraries and tools, including matplotlib, NumPy, and Pygal –Make 2D games that respond to keypresses and mouse clicks, and that grow more difficult as the game

progresses –Work with data to generate interactive visualizations –Create and customize Web apps and deploy them safely online –Deal with mistakes and errors so you can solve your own programming problems If you've been thinking seriously about digging into programming, Python Crash Course will get you up to speed and have you writing real programs fast. Why wait any longer? Start your engines and code! Uses Python 2 and 3

You Don't Know JS: Up & Going - Kyle Simpson 2015-03-20 It's easy to learn parts of JavaScript, but much harder to learn it completely—or even sufficiently—whether you're new to the language or have used it for years. With the "You Don't Know JS" book series, you'll get a more complete understanding of JavaScript, including trickier parts of the language that many experienced JavaScript programmers simply avoid. The series' first book, Up & Going, provides the necessary background for those of you with limited programming experience. By learning the basic building blocks of programming, as well as JavaScript's core mechanisms, you'll be prepared to dive into the other, more in-depth books in the series—and be well on your way toward true JavaScript. With this book you will: Learn the essential programming building blocks, including operators, types, variables, conditionals, loops, and functions Become familiar with JavaScript's core mechanisms such as values, function closures, this, and prototypes Get an overview of other books in the series—and learn why it's important to understand all parts of JavaScript

Learn Python by Building Data Science Applications - Philipp Kats 2019-08-30 Understand the constructs of the Python programming language and use them to build data science projects Key Features Learn the basics of developing applications with Python and deploy your first

data application Take your first steps in Python programming by understanding and using data structures, variables, and loops Delve into Jupyter, NumPy, Pandas, SciPy, and sklearn to explore the data science ecosystem in Python Book Description Python is the most widely used programming language for building data science applications. Complete with step-by-step instructions, this book contains easy-to-follow tutorials to help you learn Python and develop real-world data science projects. The "secret sauce" of the book is its curated list of topics and solutions, put together using a range of real-world projects, covering initial data collection, data analysis, and production. This Python book starts by taking you through the basics of programming, right from variables and data types to classes and functions. You'll learn how to write idiomatic code and test and debug it, and discover how you can create packages or use the range of built-in ones. You'll also be introduced to the extensive ecosystem of Python data science packages, including NumPy, Pandas, scikit-learn, Altair, and Datashader. Furthermore, you'll be able to perform data analysis, train models, and interpret and communicate the results. Finally, you'll get to grips with structuring and scheduling scripts using Luigi and sharing your machine learning models with the world as a microservice. By the end of the book, you'll have learned not only how to implement Python in data science projects, but also how to maintain and design them to meet high programming standards. What you will learn Code in Python using Jupyter and VS Code Explore the basics of coding – loops, variables, functions, and classes Deploy continuous integration with Git, Bash, and DVC Get to grips with Pandas, NumPy, and scikit-learn Perform data visualization with Matplotlib, Altair, and Datashader Create a package out of your code using poetry and test it with PyTest Make your machine learning model

accessible to anyone with the web API Who this book is for If you want to learn Python or data science in a fun and engaging way, this book is for you. You'll also find this book useful if you're a high school student, researcher, analyst, or anyone with little or no coding experience with an interest in the subject and courage to learn, fail, and learn from failing. A basic understanding of how computers work will be useful.

Practical MATLAB Deep Learning - Michael Paluszek 2020-02-07 Harness the power of MATLAB for deep-learning challenges. This book provides an introduction to deep learning and using MATLAB's deep-learning toolboxes. You'll see how these toolboxes provide the complete set of functions needed to implement all aspects of deep learning. Along the way, you'll learn to model complex systems, including the stock market, natural language, and angles-only orbit determination. You'll cover dynamics and control, and integrate deep-learning algorithms and approaches using MATLAB. You'll also apply deep learning to aircraft navigation using images. Finally, you'll carry out classification of ballet pirouettes using an inertial measurement unit to experiment with MATLAB's hardware capabilities. What You Will LearnExplore deep learning using MATLAB and compare it to algorithmsWrite a deep learning function in MATLAB and train it with examplesUse MATLAB toolboxes related to deep learningImplement tokamak disruption predictionWho This Book Is For Engineers, data scientists, and students wanting a book rich in examples on deep learning using MATLAB.

Python for Data Analysis - Jason Scratch 2021-02-14 55% discount for bookstores! Now at $34,95 instead of 44,95!Are you interested in seeing what machine learning is to be able to help you to get more out of your business? *Artificial Intelligence with*

Python - Prateek Joshi
2017-01-27
Build real-world Artificial Intelligence applications with Python to intelligently interact with the world around you About This Book Step into the amazing world of intelligent apps using this comprehensive guide Enter the world of Artificial Intelligence, explore it, and create your own applications Work through simple yet insightful examples that will get you up and running with Artificial Intelligence in no time Who This Book Is For This book is for Python developers who want to build real-world Artificial Intelligence applications. This book is friendly to Python beginners, but being familiar with Python would be useful to play around with the code. It will also be useful for experienced Python programmers who are looking to use Artificial Intelligence techniques in their existing technology stacks. What You Will Learn Realize different classification and regression techniques Understand the concept of clustering and how to use it to automatically segment data See how to build an intelligent recommender system Understand logic programming and how to use it Build automatic speech recognition systems Understand the basics of heuristic search and genetic programming Develop games using Artificial Intelligence Learn how reinforcement learning works Discover how to build intelligent applications centered on images, text, and time series data See how to use deep learning algorithms and build applications based on it In Detail Artificial Intelligence is becoming increasingly relevant in the modern world where everything is driven by technology and data. It is used extensively across many fields such as search engines, image recognition, robotics, finance, and so on. We will explore various real-world scenarios in this book and you'll learn about various algorithms that can be used to build Artificial Intelligence applications. During the course of this book,

you will find out how to make informed decisions about what algorithms to use in a given context. Starting from the basics of Artificial Intelligence, you will learn how to develop various building blocks using different data mining techniques. You will see how to implement different algorithms to get the best possible results, and will understand how to apply them to real-world scenarios. If you want to add an intelligence layer to any application that's based on images, text, stock market, or some other form of data, this exciting book on Artificial Intelligence will definitely be your guide! Style and approach This highly practical book will show you how to implement Artificial Intelligence. The book provides multiple examples enabling you to create smart applications to meet the needs of your organization. In every chapter, we explain an algorithm, implement it, and then build a smart application. **Python Machine Learning** - Alex Campbell 2020-06-30 Machine learning is fast becoming an important technique used by multiple industries, and in applications and research. But you don't have to be part of a massive organization with an endless pot of money to get involved. Even beginners using the Python programming language can be a part of machine learning, and that is what this book is for. Today, the only limit to machine learning is your imagination. In this book, I provide you with an overview of machine learning and some practical work to get your hands dirty. Here's what you will learn: Important machine learning concepts and applications The difference between supervised and unsupervised learning Commonly used supervised and unsupervised learning algorithms and models What libraries you will benefit from using How to visualize your data Regression and classification learning models An introduction to data science The five-step plan to becoming a data scientist Ten things that everyone needs to know about

machine learning You'll even get a complete hands-on project that takes you through building your own machine learning project. What you won't get is a lesson on using Python programming language; this book requires that you already know the basics. So, if you are interested in taking your programming even further, scroll up, hit that Buy Now button, and start a new journey of discovery.

Machine Learning Based Projects on Google Colab - MD Ariful Islam 2022-08-19 The book is prepared with 16 hands-on machine learning projects. I hope the book will be handy for those who have no idea how to take a machine learning project from start to finish. Machine learning algorithms are run in Google Colab and the output is shown instantly. In 2 hours one will get an idea how to do machine learning based tasks.
Python Machine Learning - Computer Programming Academy 2020-02-08 Would you like to learn how to use Python to generate machine learning models but you think it would be too difficult? Or perhaps you want to automate simple things with your computer but you don't know how to do it? Here's the deal... As a beginner you might think that programming is complex... Learning artificial intelligence coding can take months, and the possibility to give up before mastering it could be high. So, if you have a project to develop you could think on hiring a professional developer to shorten the time. This may seem like a good solution but it is certainly very expensive and if the developer you chose doesn't perform a proper job you still have to pay for it. The best solution is to follow a complete programming manual with hands-on projects and practical exercises. Computer Programming Academy structured this guide as a course with seven chapters for seven days and studied special exercises for each section to apply what you have learned step-by-step. This protocol, tested on both total beginners

and people who were already familiar with coding, takes advantage of the principle of diving, concentrating learning in one week. The result of this method has been one for both categories of students: the content of the course was learned faster and remembered longer respect the average. Inside this book, you will go through a first section in which fundamental and basic notions of deep learning are discussed, to get to the next chapters crafted specifically to help you learn advanced coding concepts required to develop training data sets for the production of successful machine learning models. In the detail, you will learn: Why Python is considered the fundamental tool for machine learning Deep understanding of the significance of machine learning in our daily lives and why you cannot ignored its importance in 2020 12 machine learning models that you must study as a beginner The most common mistakes to avoid when you start building machine learning models with Python Step-by-step instructions to install required packages to set up a machine learning coding environment The algorithms that will make your life easier while coding artificial intelligence A proven strategy to process raw data to generate high quality training data sets A simple method to build the desired machine learning model in less than 7 days The 2 main libraries you need implementing to develop a neural network Exercises and quizzes at the end of every chapter to review immediately what you've learned Extra content that you will appreciate as curious technology enthusiast Why is this book different? Most of the books on the market only take a brief look into machine learning, showing some of the topics but never going deep concretely. The best way to learn machine learning with Python is by doing and with this manual you will work through applicable projects in order to solidify your knowledge and obtain a huge sense of achievement. This is

what this guide offers to you, even if you're completely new to programming in 2020 or you are just looking to widen your skills as programmer. Would You Like To Know More? Scroll up to the top of the page and select the BUY NOW button. The key to become a Python master is one click away!

Learn TensorFlow 2.0 - Pramod Singh 2019-12-17
Learn how to use TensorFlow 2.0 to build machine learning and deep learning models with complete examples. The book begins with introducing TensorFlow 2.0 framework and the major changes from its last release. Next, it focuses on building Supervised Machine Learning models using TensorFlow 2.0. It also demonstrates how to build models using customer estimators. Further, it explains how to use TensorFlow 2.0 API to build machine learning and deep learning models for image classification using the standard as well as custom parameters. You'll review sequence predictions, saving, serving, deploying, and standardized datasets, and then deploy these models to production. All the code presented in the book will be available in the form of executable scripts at Github which allows you to try out the examples and extend them in interesting ways. What You'll LearnReview the new features of TensorFlow 2.0Use TensorFlow 2.0 to build machine learning and deep learning models Perform sequence predictions using TensorFlow 2.0Deploy TensorFlow 2.0 models with practical examples Who This Book Is For Data scientists, machine and deep learning engineers.

Beyond the Basic Stuff with Python - Al Sweigart 2020-12-16
BRIDGE THE GAP BETWEEN NOVICE AND PROFESSIONAL You've completed a basic Python programming tutorial or finished Al Sweigart's bestseller, Automate the Boring Stuff with Python. What's the next step toward becoming a capable, confident software developer? Welcome

to Beyond the Basic Stuff with Python. More than a mere collection of advanced syntax and masterful tips for writing clean code, you'll learn how to advance your Python programming skills by using the command line and other professional tools like code formatters, type checkers, linters, and version control. Sweigart takes you through best practices for setting up your development environment, naming variables, and improving readability, then tackles documentation, organization and performance measurement, as well as object-oriented design and the Big-O algorithm analysis commonly used in coding interviews. The skills you learn will boost your ability to program--not just in Python but in any language. You'll learn: Coding style, and how to use Python's Black auto-formatting tool for cleaner code Common sources of bugs, and how to detect them with static analyzers How to structure the files in your code projects with the Cookiecutter template tool Functional programming techniques like lambda and higher-order functions How to profile the speed of your code with Python's built-in timeit and cProfile modules The computer science behind Big-O algorithm analysis How to make your comments and docstrings informative, and how often to write them How to create classes in object-oriented programming, and why they're used to organize code Toward the end of the book you'll read a detailed source-code breakdown of two classic command-line games, the Tower of Hanoi (a logic puzzle) and Four-in-a-Row (a two-player tile-dropping game), and a breakdown of how their code follows the book's best practices. You'll test your skills by implementing the program yourself. Of course, no single book can make you a professional software developer. But Beyond the Basic Stuff with Python will get you further down that path and make you a better programmer, as you learn to write readable code that's easy

to debug and perfectly Pythonic Requirements: Covers Python 3.6 and higher
Hands-On Machine Learning with R - Brad Boehmke 2019-11-07
Hands-on Machine Learning with R provides a practical and applied approach to learning and developing intuition into today's most popular machine learning methods. This book serves as a practitioner's guide to the machine learning process and is meant to help the reader learn to apply the machine learning stack within R, which includes using various R packages such as glmnet, h2o, ranger, xgboost, keras, and others to effectively model and gain insight from their data. The book favors a hands-on approach, providing an intuitive understanding of machine learning concepts through concrete examples and just a little bit of theory. Throughout this book, the reader will be exposed to the entire machine learning process including feature engineering, resampling, hyperparameter tuning, model evaluation, and interpretation. The reader will be exposed to powerful algorithms such as regularized regression, random forests, gradient boosting machines, deep learning, generalized low rank models, and more! By favoring a hands-on approach and using real word data, the reader will gain an intuitive understanding of the architectures and engines that drive these algorithms and packages, understand when and how to tune the various hyperparameters, and be able to interpret model results. By the end of this book, the reader should have a firm grasp of R's machine learning stack and be able to implement a systematic approach for producing high quality modeling results. Features: · Offers a practical and applied introduction to the most popular machine learning methods. · Topics covered include feature engineering, resampling, deep learning and more. · Uses a hands-on approach and real world data. **Python: This Book Includes: Learn How To Develop Programs And Apps In 7**

Days With Python Programming And Start Deep Hands-on L - Oliver R. Simpson 2020-10-06
The Ultimate Crash Course On Python That Will Have You Programming In Just 7 Days! Did you know that there are 698 programming languages? One of them that is the easiest to master is Python. Named after "Monty Python's Flying Circus", a BBC comedy series from the 1970s, learning Python is a piece of cake if you have the right teacher. And, there is no better and more straightforward teacher than this course! Python is a high-level programming language with dynamic semantics that emphasizes readability and ease of use. It can be used to develop websites, desktop GUI applications, and web applications. The syntax rules of Python allow you to express concepts without writing additional code. Unlike other programming languages, Python emphasizes code readability and this programming language allows you to use English keywords instead of punctuations. Python has an extensive and robust standard library, which makes it score over other programming languages. Besides, it is an open-source programming language that will help you curtail the cost of software development significantly. Also, Python is designed with features to facilitate data analysis and visualization. You can use it to create custom big data solutions without putting extra time and effort. So, what stops you from using Python to design amazing apps? Here is the problem you face: Most people are intimidated by the thought of learning how to program because it seems incredibly complicated. While programming terminologies can be intimidating at first, they're actually quite easy to learn. Once you understand the fundamentals, everything else will be much easier. Don't let your fear of trying something new stop you! If you have a great idea for a program or an app, but you don't know how to bring it to life, this book will be

your savior. In his book, Oliver teaches you everything there is to know about Python machine learning, data science, data analysis, and programming. Once you get the hang of the basics, this crash course will help you use all this knowledge for practical tasks and start programming in seven days! Here's what you'll discover inside this book: - The Basics of Machine Learning: learn how to use classification algorithms and create data pipelines that are essential to machine learning - Essential Skills for Python Programming: a straightforward guide that will turn you from a rookie into an expert in Python programming and coding - How to Master Data Science: lessons that will teach you how to collect data from scratch, improve your skills, and become an unprecedented data scientist - And much more! This book is not for people who want to learn what is programming. It is for those who dream of becoming expert programmers without spending months learning the basics. The thing is, you can't learn how to program overnight. But, if you set aside some time every day to read this book and practice, then you'll be able to start developing your programs and apps in no time! If you're ready to start this journey then... Get Your Copy Now!

Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow - Aurélien Géron 2019-09-05 Through a series of recent breakthroughs, deep learning has boosted the entire field of machine learning. Now, even programmers who know close to nothing about this technology can use simple, efficient tools to implement programs capable of learning from data. This practical book shows you how. By using concrete examples, minimal theory, and two production-ready Python frameworks—Scikit-Learn and TensorFlow—author Aurélien Géron helps you gain an intuitive understanding of the concepts and tools for building intelligent systems. You'll learn a range of techniques, starting

with simple linear regression and progressing to deep neural networks. With exercises in each chapter to help you apply what you've learned, all you need is programming experience to get started. Explore the machine learning landscape, particularly neural nets Use Scikit-Learn to track an example machine-learning project end-to-end Explore several training models, including support vector machines, decision trees, random forests, and ensemble methods Use the TensorFlow library to build and train neural nets Dive into neural net architectures, including convolutional nets, recurrent nets, and deep reinforcement learning Learn techniques for training and scaling deep neural nets

Learn Python in One Day and Learn It Well - Jamie Chan 2015-01-07
Master Python Programming with a unique Hands-On Project Have you always wanted to learn computer programming but are afraid it'll be too difficult for you? Or perhaps you know other programming languages but are interested in learning the Python language fast? This book is for you. You no longer have to waste your time and money learning Python from lengthy books, expensive online courses or complicated Python tutorials. What this book offers... Python for Beginners Complex concepts are broken down into simple steps to ensure that you can easily master the Python language even if you have never coded before. Carefully Chosen Python Examples Examples are carefully chosen to illustrate all concepts. In addition, the output for all examples are provided immediately so you do not have to wait till you have access to your computer to test the examples. Learn The Python Programming Language Fast Concepts are presented in a "to-the-point" style to cater to the busy individual. With this book, you can learn Python in just one day and start coding immediately. How is this book different... The best way to

learn Python is by doing. This book includes a complete project at the end of the book that requires the application of all the concepts taught previously. Working through the project will not only give you an immense sense of achievement, it"ll also help you retain the knowledge and master the language. Are you ready to dip your toes into the exciting world of Python coding? This book is for you. Click the "Add to Cart" button to buy it now. What you'll learn: What is Python? What software you need to code and run Python programs? What are variables? What mathematical operators are there in Python? What are the common data types in Python? What are Lists and Tuples? How to format strings How to accept user inputs and display outputs How to make decisions with If statements How to control the flow of program with loops How to handle errors and exceptions What are functions and modules? How to define your own functions and modules How to work with

external files .. and more... Finally, you'll be guided through a hands-on project that requires the application of all the topics covered. Click the "Add to Cart" button now to start learning Python. Learn it fast and learn it well.
Python Machine Learning - Wei-Meng Lee 2019-04-04 Python makes machine learning easy for beginners and experienced developers With computing power increasing exponentially and costs decreasing at the same time, there is no better time to learn machine learning using Python. Machine learning tasks that once required enormous processing power are now possible on desktop machines. However, machine learning is not for the faint of heart—it requires a good foundation in statistics, as well as programming knowledge. Python Machine Learning will help coders of all levels master one of the most in-demand programming skillsets in use today. Readers will get started by following fundamental topics such as an introduction

to Machine Learning and Data Science. For each learning algorithm, readers will use a real-life scenario to show how Python is used to solve the problem at hand. • Python data science—manipulating data and data visualization • Data cleansing • Understanding Machine learning algorithms • Supervised learning algorithms • Unsupervised learning algorithms • Deploying machine learning models Python Machine Learning is essential reading for students, developers, or anyone with a keen interest in taking their coding skills to the next level.
Machine Learning - Stephen Marsland 2011-03-23 Traditional books on machine learning can be divided into two groups- those aimed at advanced undergraduates or early postgraduates with reasonable mathematical knowledge and those that are primers on how to code algorithms. The field is ready for a text that not only demonstrates how to use the algorithms that make up machine learning methods, but

Python Machine Learning - Computer Programming Academy 2020-11-10 Inside this book you will find all the basic notions to start with Python and all the programming concepts to build machine learning models. With our proven strategies you will write efficient Python codes in less than a week!
Python Bookcamp - Vaskaran Sarcar 2021-01-16 Python Bookcamp: Exercises and Projects is a beginner''s book. It is a quick programming guide to the Python programming language. The best way of learning is by doing exercises and projects. Therefore, this book follows the boot camp approach. It enables you to make interesting programs in no time.The world is changing, and we keep extra features developing, but the core concepts are evergreen. We build all additional features on top of those. If you have a sound foundation, you can adopt the upcoming features quickly. You also understand the reason behibrnd those changes. So, the book focuses

on core topics in-depth, but it does not cover "A-Z" in Python at the same time. The book has 12 chapters. The first chapter is a simple warm-up session for you. Here you'll set up your programming environment. The second chapter talks about the Python basics. Here you learn about variables, operators, and comments. Each subsequent chapter contains exercises and hands-on projects for you. As you move on, these projects will be more complex. You implement the case studies using the concepts you learn in a previous chapter. At the beginning of these chapters, you get a description of the projects. Once you finish reading these chapters, you get the complete solutions.The book covers both the common and the advanced data types along with the topic of loop and decision making. It also covers file handling, functions, and modules with exception handling mechanisms too. The last chapters of this book cover the object-oriented programming basics. Here you see the usage of classes, objects, and inheritance. You'll also learn about static and class methods in Python. In the end, there is a chapter to show you how to write useful tests to verify your code. In most cases, you'll see the complete programs with output. It means you can continue reading the material without interruption. To write the very short programs, or to test the simple commands, I use a Python command shell. For the remaining cases, you see the usage of PyCharm Community Edition in a Windows10 environment. This is a very popular IDE, and this version is free at the time of this writing. Many of us are afraid of fat books. They do not promise that you can complete the book in one day or 7 days, etc. Here is the twist. You should not forget that learning is a continuous process. We can achieve no real mastery in a short period. So, the motto of the book is "To learn the core topics in Python, whatever efforts I need to put, I am OK with that". I believe that if you have a strong focus, you can

complete one chapter in a day with no trouble. So, the simple arithmetic says that you can complete the book in 12 days. But it is secondary! I have designed the book in such a way that upon completion of the book, you will learn the core concepts in depth. And you''ll know how to learn further. In short, you can pick the book if the answer is "yes" to the following questions: *Have you never programmed before, but eager to learn Python? *Do you want to explore the Python essentials step-by-step, but as quickly as possible? *Do you have experience with a high-level programming languages, but want to learn Python ? *Do you know how to install software on a machine and then set up the coding environment? *Do you like to review your knowledge before you use Python in advanced fields such as data science, machine learning? Probably you shouldn''t read this book if the answer is yes to any of the following questions: *Are you confident about the fundamentals of Python? *Are you looking for advanced concepts in Python only? *Do you dislike a book that has an emphasis on exercises? *"I dislike Windows OS, and PyCharm. I want to learn and use Python without them only."-is this statement true for you? The source code and other details are available at https://github.com/Vaskaran/PythonBookcamp

Machine Learning with Python - Matt Algore 2021-01-06

Machine learning is rapidly changing the world, from diverse types of applications and research pursued in industry and academia. Machine learning is affecting every part of your daily life. From voice assistants using NLP and machine learning to make appointments, check your calendar, and play music, to programmatic advertisements - that are so accurate that they can predict what you will need before you even think of it. Powerful, isn't it? Do you want to do machine learning using Python, but you're having trouble getting

started? Then this Complete Python Handbook will teach you every single info you need to know about this popular and powerful interpreted language. In this Step by Step Tutorial you will: Learn Exactly How Phyton Works and why its functionalities are so advantageous compared with any other programming language Realize How Python is The Ideal Programming Language for Querying Data and Retrieving Valuable Insights to always be able to find what you are looking for in the easiest possible way. Have the Chance to Practice What You Learn thanks to the exercises you find inside this Manual so that you are always sure you are doing the right thing in the right way. Discover, Even if You Use Python As a Beginner, Practical Ways to Build Your Machine Learning Solutions. With all the data available today, machine learning applications are limited only by your imagination. Have in Your Hands Several Possibilities for Both High and Low-Level Web Development to create websites and web applications for any kind of business ... & Lot More! Stop being afraid of all those difficult and tricky programming languages, now you can start learning or improve your knowledge of this incredible and super easy to understand programming language. This Machine Learning With Python Tutorial is designed for software programmers and beginners who need to learn Python programming language from scratch. Python is chosen by the best in the world, companies like Google, Facebook, or Microsoft, and it's growing very fast. Developers love its features. Eager to know why? Order Your Copy Now And Start Coding Your Best Project Ever!
Deep Learning for Coders with fastai and PyTorch - Jeremy Howard 2020-06-29
Deep learning is often viewed as the exclusive domain of math PhDs and big tech companies. But as this hands-on guide demonstrates, programmers comfortable with

Python can achieve impressive results in deep learning with little math background, small amounts of data, and minimal code. How? With fastai, the first library to provide a consistent interface to the most frequently used deep learning applications. Authors Jeremy Howard and Sylvain Gugger, the creators of fastai, show you how to train a model on a wide range of tasks using fastai and PyTorch. You'll also dive progressively further into deep learning theory to gain a complete understanding of the algorithms behind the scenes. Train models in computer vision, natural language processing, tabular data, and collaborative filtering Learn the latest deep learning techniques that matter most in practice Improve accuracy, speed, and reliability by understanding how deep learning models work Discover how to turn your models into web applications Implement deep learning algorithms from scratch Consider the ethical implications of your work Gain insight from the foreword by PyTorch cofounder, Soumith Chintala

Python - Ethem Mining 2019-12-30
What do you need to learn to move from being a complete beginner to someone with advanced knowledge of Python Programming? Do you want to understand which ones are the best libraries to use, and why is Python considered the best language for machine learning? Do you want to use what you have learnt via step by step guides? Python is currently one of the most popular programming languages and it's used by established companies such as Google, Instagram and Spotify. Its large popularity is explained by its truly easy learning mechanism. Everyone can learn to use it and write the first codes in just a couple of days. The main advantages of Python are: Python is a multiplatform which means it is suitable for windows, linux and IOS as long as Python interpreter is properly installed in the hardware You can access a very large selection of

libraries - there are several libraries developed by third parties, apart those standard included in Python It's totally open source and and includes a wide community This book has been created specifically for those who want to use this language for the first time and it doesn't require any pre knowledge. The best way to learn a programming language is to understand the logic behind its creation, learn all the steps tailored to create a full project, apply the basic notions via practical examples which will help you to fix the concept learnt. And this is what you will learn in this book. The aim of this book is to elevate your python knowledge to a more advanced level which will enable you to stand out from the crowd. You will learn: How to install Python step by step How to write your first Python Program How to debug a Python Program Which ones are the best libraries and how to import them How machine learning works in 7 simple steps Multiple ways to access computing power in machine learning How to utilise the best Python libraries for machine learning and much more This book is full of practical examples and practices that will have an immediate and positive impact on your knowledge. Even if you have never tried to use a programming language or you found it very difficult, do not worry. Thanks to this book, you will be able to program python like a pro in a very short time. Would You Like To Know More? Scroll to the top of the page and select the BUY NOW button.
Real-World Python - Lee Vaughan 2020-11-05
A project-based approach to learning Python programming for beginners. Intriguing projects teach you how to tackle challenging problems with code. You've mastered the basics. Now you're ready to explore some of Python's more powerful tools. Real-World Python will show you how. Through a series of hands-on projects, you'll investigate and solve real-world problems using sophisticated computer

vision, machine learning, data analysis, and language processing tools. You'll be introduced to important modules like OpenCV, NumPy, Pandas, NLTK, Bokeh, Beautiful Soup, Requests, HoloViews, Tkinter, turtle, matplotlib, and more. You'll create complete, working programs and think through intriguing projects that show you how to: Save shipwrecked sailors with an algorithm designed to prove the existence of God Detect asteroids and comets moving against a starfield Program a sentry gun to shoot your enemies and spare your friends Select landing sites for a Mars probe using real NASA maps Send unbreakable messages based on a book code Survive a zombie outbreak using data science Discover exoplanets and alien megastructures orbiting distant stars Test the hypothesis that we're all living in a computer simulation And more! If you're tired of learning the bare essentials of Python Programming with isolated snippets of code, you'll relish the relevant and geeky fun of Real-World Python!
Python Crash Course, 2nd Edition - Eric Matthes 2019-05-21 The second edition of the best-selling Python book in the world (over 1 million copies sold!). A fast-paced, no-nonsense guide to programming in Python. Updated and thoroughly revised to reflect the latest in Python code and practices. Python Crash Course is the world's best-selling guide to the Python programming language. This fast-paced, thorough introduction to programming with Python will have you writing programs, solving problems, and making things that work in no time. In the first half of the book, you'll learn basic programming concepts, such as variables, lists, classes, and loops, and practice writing clean code with exercises for each topic. You'll also learn how to make your programs interactive and test your code safely before adding it to a project. In the second half, you'll put your

new knowledge into practice with three substantial projects: a Space Invaders-inspired arcade game, a set of data visualizations with Python's handy libraries, and a simple web app you can deploy online. As you work through the book, you'll learn how to: • Use powerful Python libraries and tools, including Pygame, Matplotlib, Plotly, and Django • Make 2D games that respond to keypresses and mouse clicks, and that increase in difficulty • Use data to generate interactive visualizations • Create and customize web apps and deploy them safely online • Deal with mistakes and errors so you can solve your own programming problems If you've been thinking about digging into programming, Python Crash Course will get you writing real programs fast. Why wait any longer? Start your engines and code!

Machine Learning for Kids - Dale Lane 2021-02-09 A hands-on, application-based introduction to machine learning and artificial intelligence (AI). Create compelling AI-powered games and applications using the Scratch programming language. AI Made Easy with 13 Projects Machine learning (also known as ML) is one of the building blocks of AI, or artificial intelligence. AI is based on the idea that computers can learn on their own, with your help. Machine Learning for Kids will introduce you to machine learning, painlessly. With this book and its free, Scratch-based companion website, you'll see how easy it is to add machine learning to your own projects. You don't even need to know how to code! Step by easy step, you'll discover how machine learning systems can be taught to recognize text, images, numbers, and sounds, and how to train your models to improve them. You'll turn your models into 13 fun computer games and apps, including: A Rock, Paper, Scissors game that recognizes your hand shapes A computer character that reacts to insults and compliments An interactive

virtual assistant (like Siri or Alexa) A movie recommendation app An AI version of Pac-Man There's no experience required and step-by-step instructions make sure that anyone can follow along! No Experience Necessary! Ages 12+

Machine Learning Bookcamp - Alexey Grigorev 2021-11-23

Time to flex your machine learning muscles! Take on the carefully designed challenges of the Machine Learning Bookcamp and master essential ML techniques through practical application. Summary In Machine Learning Bookcamp you will: Collect and clean data for training models Use popular Python tools, including NumPy, Scikit-Learn, and TensorFlow Apply ML to complex datasets with images Deploy ML models to a production-ready environment The only way to learn is to practice! In Machine Learning Bookcamp, you'll create and deploy Python-based machine learning models for a variety of increasingly challenging projects. Taking you from the basics of machine learning to complex applications such as image analysis, each new project builds on what you've learned in previous chapters. You'll build a portfolio of business-relevant machine learning projects that hiring managers will be excited to see. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Master key machine learning concepts as you build actual projects! Machine learning is what you need for analyzing customer behavior, predicting price trends, evaluating risk, and much more. To master ML, you need great examples, clear explanations, and lots of practice. This book delivers all three! About the book Machine Learning Bookcamp presents realistic, practical machine learning scenarios, along with crystal-clear coverage of key concepts. In it, you'll complete engaging projects, such as creating a car price predictor using linear regression and

deploying a churn prediction service. You'll go beyond the algorithms and explore important techniques like deploying ML applications on serverless systems and serving models with Kubernetes and Kubeflow. Dig in, get your hands dirty, and have fun building your ML skills! What's inside Collect and clean data for training models Use popular Python tools, including NumPy, Scikit-Learn, and TensorFlow Deploy ML models to a production-ready environment About the reader Python programming skills assumed. No previous machine learning knowledge is required. About the author Alexey Grigorev is a principal data scientist at OLX Group. He runs DataTalks.Club, a community of people who love data. Table of Contents 1 Introduction to machine learning 2 Machine learning for regression 3 Machine learning for classification 4 Evaluation metrics for classification 5 Deploying machine learning models 6 Decision trees and ensemble learning 7 Neural networks and deep learning 8 Serverless deep learning 9 Serving models with Kubernetes and Kubeflow

Hands-On Unsupervised Learning Using Python - Ankur A. Patel 2019-02-21 Many industry experts consider unsupervised learning the next frontier in artificial intelligence, one that may hold the key to general artificial intelligence. Since the majority of the world's data is unlabeled, conventional supervised learning cannot be applied. Unsupervised learning, on the other hand, can be applied to unlabeled datasets to discover meaningful patterns buried deep in the data, patterns that may be near impossible for humans to uncover. Author Ankur Patel shows you how to apply unsupervised learning using two simple, production-ready Python frameworks: Scikit-learn and TensorFlow using Keras. With code and hands-on examples, data scientists will identify difficult-to-find patterns in data and gain deeper business insight,

detect anomalies, perform automatic feature engineering and selection, and generate synthetic datasets. All you need is programming and some machine learning experience to get started. Compare the strengths and weaknesses of the different machine learning approaches: supervised, unsupervised, and reinforcement learning Set up and manage machine learning projects end-to-end Build an anomaly detection system to catch credit card fraud Clusters users into distinct and homogeneous groups Perform semisupervised learning Develop movie recommender systems using restricted Boltzmann machines Generate synthetic images using generative adversarial networks

Practical Deep Learning - Ron Kneusel 2021-03-16 Practical Deep Learning teaches total beginners how to build the datasets and models needed to train neural networks for your own DL projects. If you've been curious about machine learning but didn't know where to start, this is the book you've been waiting for. Focusing on the subfield of machine learning known as deep learning, it explains core concepts and gives you the foundation you need to start building your own models. Rather than simply outlining recipes for using existing toolkits, Practical Deep Learning teaches you the why of deep learning and will inspire you to explore further. All you need is basic familiarity with computer programming and high school math—the book will cover the rest. After an introduction to Python, you'll move through key topics like how to build a good training dataset, work with the scikit-learn and Keras libraries, and evaluate your models' performance. You'll also learn: • How to use classic machine learning models like k-Nearest Neighbors, Random Forests, and Support Vector Machines • How neural networks work and how they're trained • How to use convolutional neural networks • How to develop a successful deep learning model

from scratch You'll conduct experiments along the way, building to a final case study that incorporates everything you've learned. The perfect introduction to this dynamic, ever-expanding field, Practical Deep Learning will give you the skills and confidence to dive into your own machine learning projects.

Python - Computer Programming Academy 2020-11-24 Have you always wanted to learn computer programming but you're worried it will take too long? Would you like to automate something simple with your PC but you don't know how to do it? Or maybe you know other programming languages and are interested in learning Python quickly? As a beginner you might think that programming is difficult and the possibility to give up before mastering it could be high... So, if you have a project to develop you could think on hiring a programmer to shorten the time. This may seem like a good idea but it is certainly very expensive.

Otherwise you could waste your time pursuing tutorials online. The best solution is to follow a complete programming manual with hands-on projects and practical exercises. What you will find inside and a quick overview of the main topics: ⬜ Why Python is considered the best programming language for a beginner ⬜ The most common mistakes to avoid when you start programming ⬜ BOOK 1: PYTHON PROGRAMMING - The 7 built-in functions to make your life easier while coding a software program - The program you need to develop your first own application ⬜ BOOK 2: PYTHON MACHINE LEARNING - The algorithms that will make your life easier - The 2 libraries you need implementing to develop the desired ML models ⬜ BOOK 3: PYTHON DATA SCIENCE - 3 actions required to gain insights from big data - A simple method to implement predictive analytics ⬜ Some projects to write Python codes in less than a week ⬜ Quizzes at the end of every chapter to

review immediately what you've learned Why is this book different? Computer Programming Academy structured these guides as a course with seven chapters for seven days with special exercises for each section.This protocol, tested on both beginners and people who were already familiar with coding, takes advantage of the principle of diving, concentrating learning in one week. The result? The content of the course was learned faster and remembered longer. Even if you're completely new to programming in 2020 or you are just looking to widen your skills as programmer this book is perfect for you. Now's the best time to begin learning Python... click the "BUY NOW" button and get started! Python Machine Learning - Sebastian Raschka 2015-09-23 Unlock deeper insights into Machine Leaning with this vital guide to cutting-edge predictive analytics About This Book Leverage Python's most powerful open-source libraries for deep learning, data wrangling, and data visualization Learn effective strategies and best practices to improve and optimize machine learning systems and algorithms Ask – and answer – tough questions of your data with robust statistical models, built for a range of datasets Who This Book Is For If you want to find out how to use Python to start answering critical questions of your data, pick up Python Machine Learning – whether you want to get started from scratch or want to extend your data science knowledge, this is an essential and unmissable resource. What You Will Learn Explore how to use different machine learning models to ask different questions of your data Learn how to build neural networks using Keras and Theano Find out how to write clean and elegant Python code that will optimize the strength of your algorithms Discover how to embed your machine learning model in a web application for increased accessibility Predict continuous target outcomes using

regression analysis Uncover hidden patterns and structures in data with clustering Organize data using effective pre-processing techniques Get to grips with sentiment analysis to delve deeper into textual and social media data In Detail Machine learning and predictive analytics are transforming the way businesses and other organizations operate. Being able to understand trends and patterns in complex data is critical to success, becoming one of the key strategies for unlocking growth in a challenging contemporary marketplace. Python can help you deliver key insights into your data – its unique capabilities as a language let you build sophisticated algorithms and statistical models that can reveal new perspectives and answer key questions that are vital for success. Python Machine Learning gives you access to the world of predictive analytics and demonstrates why Python is one of the world's leading data science languages. If you want to ask better questions of data, or need to improve and extend the capabilities of your machine learning systems, this practical data science book is invaluable. Covering a wide range of powerful Python libraries, including scikit-learn, Theano, and Keras, and featuring guidance and tips on everything from sentiment analysis to neural networks, you'll soon be able to answer some of the most important questions facing you and your organization. Style and approach Python Machine Learning connects the fundamental theoretical principles behind machine learning to their practical application in a way that focuses you on asking and answering the right questions. It walks you through the key elements of Python and its powerful machine learning libraries, while demonstrating how to get to grips with a range of statistical models.