Master the best methods for PYTHON. Learn how to programming as a pro and get positive ROI in 7 days with data
science and machine learning 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 trading thanks to the artificial intelligence? If
so, keep reading: this bundle book is for you! Today, thanks to computer programming and PYTHON we can work with
sophisticated machines that can study human behavior and identify underlying human behavioral patterns. Scientists can
predict effectively what products and services consumers are interested in. You can also create various quantitative and
algorithmic trading strategies using Python. It is getting increasingly challenging for traditional businesses to retain their
customers without adopting one or more of the cutting-edge technology explained in this book. MACHINE LEARNING
FOR ALGORITHM TRADING will introduce you many selected tips and breaking down the basics of coding applied to
finance. You will discover as a beginner the world of data science, machine learning and artificial intelligence with step-by-
step guides that will guide you during the code-writing learning process. The following list is just a tiny fraction of what
you will learn in this bundle PYTHON FOR DATA SCIENCE ? Differences among programming languages: Vba, SQL, R,
Python ? 3 reasons why Python is fundamental for Data Science ? Introduction to some Python libraries like NumPy,
Pandas, Matplotlib, ? 3 step system why Python is fundamental for Data Science ?Describe the steps required to develop
and test an ML-driven trading strategy. PYTHON CRASH COURSE ? A Proven Method to Write your First Program in 7
Days ? 3 Common Mistakes to Avoid when You Start Coding ? Fit Python Data Analysis to your business ? 7 Most
effective Machine Learning Algorithms ? Describe the methods used to optimize an ML-driven trading strategy. DAY AND
SWING TRADING ? How Swing trading differs from Day trading in terms of risk-aversion ? How your money should be
invested and which trade is more profitable ? Swing and Day trading proven indicators to learn investment timing ? The
secret DAY trading strategies leading to a gain of $ 9,000 per month and more than $100,000 per year. OPTIONS
TRADING FOR BEGINNERS ? Options Trading Strategies that guarantee real results in all market conditions ? Top 7
endorsed indicators of a successful investment ? The Bull & Bear Game ? Learn about the 3 best charts patterns to
fluctuations of stock prices Even if you have never written a programming code before, you will quickly grasp the basics
thanks to visual charts and guidelines for coding. Today is the best day to start programming like a pro. For those trading
with leverage, looking for a way to take a controlled approach and manage risk, a properly designed trading system is the
answer If you really wish to learn MACHINE LEARNING FOR ALGORITHM TRADING and master its language, please
click the BUY NOW button.
Understand the industrialization of machine learning (ML) and take the first steps toward identifying and generating the transformational disruptors of artificial intelligence (AI). You will learn to apply ML to data lakes in various industries, supplying data professionals with the advanced skills required to handle the future of data engineering and data science. Data lakes currently generated by worldwide industrialized business activities are projected to reach 35 zettabytes (ZB) as the Fourth Industrial Revolution produces an exponential increase of volume, velocity, variety, variability, veracity, visualization, and value. Industrialization of ML evolves from AI and studying pattern recognition against the increasingly unstructured resource stored in data lakes. Industrial Machine Learning supplies advanced, yet practical examples in different industries, including finance, public safety, health care, transportation, manufactory, supply chain, 3D printing, education, research, and data science. The book covers: supervised learning, unsupervised learning, reinforcement learning, evolutionary computing principles, soft robotics disruptors, and hard robotics disruptors. What You Will Learn

- Generate and identify transformational disruptors of artificial intelligence (AI)
- Understand the field of machine learning (ML) and apply it to handle big data and process the data lakes in your environment
- Hone the skills required to handle the future of data engineering and data science

Who This Book Is For

Intermediate to expert level professionals in the fields of data science, data engineering, machine learning, and data management

This book presents emerging concepts in data mining, big data analysis, communication, and networking technologies, and discusses the state-of-the-art in data engineering practices to tackle massive data distributions in smart networked environments. It also provides insights into potential data distribution challenges in ubiquitous data-driven networks, highlighting research on the theoretical and systematic framework for analyzing, testing and designing intelligent data analysis models for evolving communication frameworks. Further, the book showcases the latest developments in wireless sensor networks, cloud computing, mobile network, autonomous systems, cryptography, automation, and other communication and networking technologies. In addition, it addresses data security, privacy and trust, wireless networks, data classification, data prediction, performance analysis, data validation and verification models, machine learning, sentiment analysis, and various data analysis techniques.

Practical, hands-on solutions in Python to overcome any problem in Machine Learning

Key Features

- Master the advanced concepts, methodologies, and use cases of machine learning
- Build ML applications for analytics, NLP and computer vision domains
- Solve the most common problems in building machine learning models

Book Description

Machine learning (ML) helps you find hidden insights from your data without the need for explicit programming. This book is your key to solving any kind of ML problem you might come across in your job. You'll encounter a set of simple to complex problems while building ML models, and you'll not only resolve these problems, but you'll also learn how to
build projects based on each problem, with a practical approach and easy-to-follow examples. The book includes a wide range of applications: from analytics and NLP, to computer vision domains. Some of the applications you will be working on include stock price prediction, a recommendation engine, building a chat-bot, a facial expression recognition system, and many more. The problem examples we cover include identifying the right algorithm for your dataset and use cases, creating and labeling datasets, getting enough clean data to carry out processing, identifying outliers, overfitting datasets, hyperparameter tuning, and more. Here, you'll also learn to make more timely and accurate predictions. In addition, you'll deal with more advanced use cases, such as building a gaming bot, building an extractive summarization tool for medical documents, and you'll also tackle the problems faced while building an ML model. By the end of this book, you'll be able to fine-tune your models as per your needs to deliver maximum productivity. What you will learn Select the right algorithm to derive the best solution in ML domains Perform predictive analysis efficiently using ML algorithms Predict stock prices using the stock index value Perform customer analytics for an e-commerce platform Build recommendation engines for various domains Build NLP applications for the health domain Build language generation applications using different NLP techniques Build computer vision applications such as facial emotion recognition Who this book is for This book is for the intermediate users such as machine learning engineers, data engineers, data scientists, and more, who want to solve simple to complex machine learning problems in their day-to-day work and build powerful and efficient machine learning models. A basic understanding of the machine learning concepts and some experience with Python programming is all you need to get started with this book. Deep learning methods offer a lot of promise for time series forecasting, such as the automatic learning of temporal dependence and the automatic handling of temporal structures like trends and seasonality. With clear explanations, standard Python libraries, and step-by-step tutorial lessons you’ll discover how to develop deep learning models for your own time series forecasting projects. Due to the growing use of web applications and communication devices, the use of data has increased throughout various industries. It is necessary to develop new techniques for managing data in order to ensure adequate usage. The Handbook of Research on Pattern Engineering System Development for Big Data Analytics is a critical scholarly resource that examines the incorporation of pattern management in business technologies as well as decision making and prediction process through the use of data management and analysis. Featuring coverage on a broad range of topics such as business intelligence, feature extraction, and data collection, this publication is geared towards professionals, academicians, practitioners, and researchers seeking current research on the development of pattern management systems for business applications.
In this thesis, ARIMA model, Long Short Term Memory (LSTM) model and Extreme Gradient Boosting (XGBoost) models were developed to predict daily adjusted close price of selected stocks from January 3, 2017 to April 24, 2020. Daily stock price data includes columns of open, close, adjusted close, high, low and volume. In ARIMA and LSTM models, the only features we used as model inputs were previous N days’ stock prices. Prediction on day N+1 was calculated based on previous N values. RMSE and MAPE were calculated from this rolling forecast and the actual price in the test dataset. Optimal parameters were selected to be the setting that yielded the lowest RMSE score. Residuals diagnostic was performed to check model assumption for the final ARIMA model. In XGBoost model, feature engineering was used to create two additional features from open, close, high and low price. Same with LSTM model, previous N days features were used as features in day N+1 for prediction. In both LSTM and XGBoost models, training dataset was scaled for model fitting. Features and output from cross-validation and test dataset were scaled too based on previous N days’ values. The prediction results were then reverted back to original scale before calculation of RMSE and MAPE scores. In conclusion, looking at the prediction versus actual stock price plot for each stock and their RMSE and MAPE scores, all three models produced good forecast of next day’s stock price. However, during the time with great volatility, the lag between forecast value and actual value is more noticeable. In our models, historical N days stock price on its own could provide a relatively accurate prediction on N+1 day’s stock price. In XGBoost model particularly, we found out that N=2 provided better RMSE and MAPE(%) results than other larger values of N (previous N days). As N gets larger, prediction accuracy got lower in XGBoost. In XGBoost feature importance analysis, the most important factor to today’s stock price is its price yesterday. Although the final ARIMA model achieved the lowest RMSE score, grid search for one-step ARIMA forecast model parameters took the longest computing time, while XGBoost model with the second lowest RMSE score required the least time for parameter tuning and forecast calculation.

The book presents a collection of peer-reviewed articles from the International Conference on Advances and Applications of Artificial Intelligence and Machine Learning - ICAAAIML 2020. The book covers research in the areas of artificial intelligence, machine learning, and deep learning applications in healthcare, agriculture, business and security. This volume contains research papers from academicians, researchers as well as students. There are also papers on core concepts of computer networks, intelligent system design and deployment, real-time systems, wireless sensor network, sensors and sensor nodes, software engineering, and image processing. This book will be a valuable resource for students, academics and practitioners in industry working on AI applications.

Advances in machine learning techniques and ever-increasing computing power has helped create a new generation of hardware and software technologies with practical applications for nearly every industry. As the progress has, in turn, excited the interest of
venture investors, technology firms, and a growing number of clients, implementing intelligent automation in both physical and information systems has become a must in business. Handbook of Research on Smart Technology Models for Business and Industry is an essential reference source that discusses relevant abstract frameworks and the latest experimental research findings in theory, mathematical models, software applications, and prototypes in the area of smart technologies. Featuring research on topics such as digital security, renewable energy, and intelligence management, this book is ideally designed for machine learning specialists, industrial experts, data scientists, researchers, academicians, students, and business professionals seeking coverage on current smart technology models.

For centuries, human beings have tried to predict the future, whether it be NBA playoffs, weather, or elections. In this book, we tackle the common misconception that the stock market cannot be predicted, and build a stock prediction algorithm to beat the stock market, using Deep Learning, Data Analysis, and Natural Language Processing techniques. If you’re new to Artificial Intelligence and Python, and are curious to learn more, this is a great book for you! Industry experts also have plenty to learn from the variety of methods and techniques used in data collection and manipulation.

ABOUT THE AUTHOR
Ethan Shaotran is an AI developer, researcher, and author of "Stock Prediction with Deep Learning". He is the founder of Energize.AI, where he built a financial stock prediction algorithm that outperformed the stock market in 2017. He is currently working on a thought experiment series to raise awareness on AI-related societal challenges within the AI community, regarding regulation and potential moral hazards, as well as autonomous vehicle driving software. Ethan has studied Economics and AI courses from Harvard, Stanford, and USF, is an affiliate with the Harvard Kennedy School's AI Initiative and is a member of the Association for Computing Machinery.

Stock Prediction with Deep Learning
Techniques for design, testing, validation and analysis of systems for trading stocks, futures, ETFs, and FOREX. Includes techniques for assessing system health, dynamical determining maximum safe position size, and estimating profit potential. This book includes the original, peer reviewed research articles from the 2nd International Conference on Cybernetics, Cognition and Machine Learning Applications (ICCCMLA 2020), held in August, 2020 at Goa, India. It covers the latest research trends or developments in areas of data science, artificial intelligence, neural networks, cognitive science and machine learning applications, cyber physical systems and cybernetics.

Gain practical skills in machine learning for finance, healthcare, and retail. This book uses a hands-on approach by providing case studies from each of these domains: you'll see examples that demonstrate how to use machine learning as a tool for business enhancement. As a domain expert, you will not only discover how machine learning is used in finance, healthcare, and retail, but also work through practical case studies where machine learning has been implemented. Machine Learning Applications Using Python is divided into three sections, one for each of the domains (healthcare, finance, and retail). Each section starts with an overview of machine learning and key technological advancements in that domain. You'll then learn more by using case studies...
on how organizations are changing the game in their chosen markets. This book has practical case studies with Python code and
domain-specific innovative ideas for monetizing machine learning. What You Will Learn Discover applied machine learning
processes and principles Implement machine learning in areas of healthcare, finance, and retail Avoid the pitfalls of implementing
applied machine learning Build Python machine learning examples in the three subject areas Who This Book Is For Data scientists
and machine learning professionals.
Data analysis and machine learning are research areas at the intersection of computer science, artificial intelligence,
mathematics and statistics. They cover general methods and techniques that can be applied to a vast set of applications
such as web and text mining, marketing, medical science, bioinformatics and business intelligence. This volume contains
the revised versions of selected papers in the field of data analysis, machine learning and applications presented during
the 31st Annual Conference of the German Classification Society (Gesellschaft für Klassifikation - GfKl). The conference
was held at the Albert-Ludwigs-University in Freiburg, Germany, in March 2007.
This book is a collection of the most recent approaches that combine metaheuristics and machine learning. Some of the
methods considered in this book are evolutionary, swarm, machine learning, and deep learning. The chapters were
classified based on the content; then, the sections are thematic. Different applications and implementations are included;
in this sense, the book provides theory and practical content with novel machine learning and metaheuristic algorithms.
The chapters were compiled using a scientific perspective. Accordingly, the book is primarily intended for undergraduate
and postgraduate students of Science, Engineering, and Computational Mathematics and is useful in courses on Artificial
Intelligence, Advanced Machine Learning, among others. Likewise, the book is useful for research from the evolutionary
computation, artificial intelligence, and image processing communities.
This book presents selected peer-reviewed papers from the International Conference on Artificial Intelligence and Data
Engineering (AIDE 2019). The topics covered are broadly divided into four groups: artificial intelligence, machine vision
and robotics, ambient intelligence, and data engineering. The book discusses recent technological advances in the
emerging fields of artificial intelligence, machine learning, robotics, virtual reality, augmented reality, bioinformatics,
intelligent systems, cognitive systems, computational intelligence, neural networks, evolutionary computation, speech
processing, Internet of Things, big data challenges, data mining, information retrieval, and natural language processing.
Given its scope, this book can be useful for students, researchers, and professionals interested in the growing
applications of artificial intelligence and data engineering.
With the help of this book, you'll build smart algorithmic models using machine learning algorithms covering tasks such as
time series forecasting, backtesting, trade predictions, and more using easy-to-follow examples. By the end, you'll be
able to adopt algorithmic trading in your own business and implement intelligent investigative strategies.

This book constitutes the refereed proceedings of the 22 International Conference on Database and Expert Systems Applications, DEXA 2011, held in Toulouse, France, August 29 - September 2, 2011. The 52 revised full papers and 40 short papers presented were carefully reviewed and selected from 207 submissions. The papers are organized in topical sections on XML querying and views; data mining; queries and search; semantic web; information retrieval; business applications; user support; indexing; queries, views and data warehouses; ontologies; physical aspects of databases; Design; distribution; miscellaneous topics.

Drawing from his experience as a securities analyst, economist, and investor, the author explains the workings of Wall Street and offers advice on determining the value and potential of stocks.

We propose multiple advanced learning methods to deal with the "curse of dimensionality" challenge in the cross-sectional stock returns. Our purpose is to predict the one-month-ahead stock returns by the rm characteristics which are so-called "anomalies". Compared with the traditional methods like portfolio sorting and Fama Factor models, we focus on using all existing machine learning methods to do the prediction rather than the explanation. To alleviate the concern of excessive data mining, we use several regularization penalties that can lead to a sparse and robust model. Our method can identify the return predictors with incremental pricing information and learn the interaction effects by applying to a hierarchical structure. Our best method can achieve much higher out of sample R2 and portfolio Sharp Ratios than traditional linear regression method.

A look at how new technologies can be put to use in the creation of a more just society. Artificial Intelligence (AI) is not likely to make humans redundant. Nor will it create superintelligence anytime soon. But it will make huge advances in the next two decades, revolutionize medicine, entertainment, and transport, transform jobs and markets, and vastly increase the amount of information that governments and companies have about individuals. AI for Good leads off with economist and best-selling author Daron Acemoglu, who argues that there are reasons to be concerned about these developments. AI research today pays too much attention to the technological hurdles ahead without enough attention to its disruptive effects on the fabric of society: displacing workers while failing to create new opportunities for them and threatening to undermine democratic governance itself. But the direction of AI development is not preordained. Acemoglu argues for its potential to create shared prosperity and bolster democratic freedoms. But directing it to that task will take great effort: It will require new funding and regulation, new norms and priorities for developers themselves, and regulations over new technologies and their applications. At the intersection of technology and economic justice, this book will bring together experts--economists, legal scholars, policy makers, and developers--to debate these challenges and consider what steps
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.

Nowadays, people show more and more enthusiasm for applying machine learning methods to finance domain. Many scholars and investors are trying to discover the mystery behind the stock market by applying deep learning. This thesis compares four machine learning methods: long short-term memory (LSTM), gated recurrent units (GRU), support vector machine (SVM), and eXtreme gradient boosting (XGBoost) to test which one performs the best in predicting the stock trend. I chose stock price indicators from 20 well-known public companies and calculated their related technical indicators as inputs, which are the Relative Strength Index, the Average Directional Movement Index, and the Parabolic Stop and Reverse. Experimental results show that recurrent neural network outperforms in time-series related prediction. Especially for gated recurrent units, its accuracy rate is around 5% higher than support vector machine and eXtreme gradient boosting.

“Bali, Engle, and Murray have produced a highly accessible introduction to the techniques and evidence of modern
Empirical asset pricing. This book should be read and absorbed by every serious student of the field, academic and professional.” Eugene Fama, Robert R. McCormick Distinguished Service Professor of Finance, University of Chicago and 2013 Nobel Laureate in Economic Sciences “The empirical analysis of the cross-section of stock returns is a monumental achievement of half a century of finance research. Both the established facts and the methods used to discover them have subtle complexities that can mislead casual observers and novice researchers. Bali, Engle, and Murray’s clear and careful guide to these issues provides a firm foundation for future discoveries.” John Campbell, Morton L. and Carole S. Olshan Professor of Economics, Harvard University “Bali, Engle, and Murray provide clear and accessible descriptions of many of the most important empirical techniques and results in asset pricing.” Kenneth R. French, Roth Family Distinguished Professor of Finance, Tuck School of Business, Dartmouth College “This exciting new book presents a thorough review of what we know about the cross-section of stock returns. Given its comprehensive nature, systematic approach, and easy-to-understand language, the book is a valuable resource for any introductory PhD class in empirical asset pricing.” Lubos Pastor, Charles P. McQuaid Professor of Finance, University of Chicago

Empirical Asset Pricing: The Cross Section of Stock Returns is a comprehensive overview of the most important findings of empirical asset pricing research. The book begins with thorough expositions of the most prevalent econometric techniques with in-depth discussions of the implementation and interpretation of results illustrated through detailed examples. The second half of the book applies these techniques to demonstrate the most salient patterns observed in stock returns. The phenomena documented form the basis for a range of investment strategies as well as the foundations of contemporary empirical asset pricing research. Empirical Asset Pricing: The Cross Section of Stock Returns also includes: Discussions on the driving forces behind the patterns observed in the stock market An extensive set of results that serve as a reference for practitioners and academics alike Numerous references to both contemporary and foundational research articles Empirical Asset Pricing: The Cross Section of Stock Returns is an ideal textbook for graduate-level courses in asset pricing and portfolio management. The book is also an indispensable reference for researchers and practitioners in finance and economics. Turan G. Bali, PhD, is the Robert Parker Chair Professor of Finance in the McDonough School of Business at Georgetown University. The recipient of the 2014 Jack Treynor prize, he is the coauthor of Mathematical Methods for Finance: Tools for Asset and Risk Management, also published by Wiley. Robert F. Engle, PhD, is the Michael Armellino Professor of Finance in the Stern School of Business at New York University. He is the 2003 Nobel Laureate in Economic Sciences, Director of the New York University Stern Volatility Institute, and co-founding President of the Society for Financial Econometrics. Scott Murray, PhD, is an Assistant Professor in the Department of Finance in the J. Mack Robinson College of Business at Georgia State University. He is
the recipient of the 2014 Jack Treynor prize. Argues that post-crisis Wall Street continues to be controlled by large banks and explains how a small, diverse group of Wall Street men have banded together to reform the financial markets.

Artificial intelligence (AI) has grown in presence in asset management and has revolutionized the sector in many ways. It has improved portfolio management, trading, and risk management practices by increasing efficiency, accuracy, and compliance. In particular, AI techniques help construct portfolios based on more accurate risk and return forecasts and more complex constraints. Trading algorithms use AI to devise novel trading signals and execute trades with lower transaction costs. AI also improves risk modeling and forecasting by generating insights from new data sources. Finally, robo-advisors owe a large part of their success to AI techniques. Yet the use of AI can also create new risks and challenges, such as those resulting from model opacity, complexity, and reliance on data integrity.

This new edited volume consists of a collection of original articles written by leading financial economists and industry experts in the area of machine learning for asset management. The chapters introduce the reader to some of the latest research developments in the area of equity, multi-asset and factor investing. Each chapter deals with new methods for return and risk forecasting, stock selection, portfolio construction, performance attribution and transaction costs modeling. This volume will be of great help to portfolio managers, asset owners and consultants, as well as academics and students who want to improve their knowledge of machine learning in asset management.

These proceedings present a selection of papers presented at the 3rd International Conference on Materials Mechanics and Management 2017 (IMMM 2017), which was jointly organized by the Departments of Civil Engineering, Mechanical Engineering and Architecture of College of Engineering Trivandrum. Developments in the fields of materials, mechanics and management have paved the way for overall improvements in all aspects of human life. The quest for meeting the requirements of the rapidly increasing population has led to revolutionary construction and production technologies aiming at optimum management and use of natural resources. The objective of this conference was to bring together experts from academic institutions, industries, research organizations and professionals for sharing of knowledge, expertise and experience in the emerging trends related to Civil Engineering, Mechanical Engineering and Architecture. IMMM 2017 provided opportunities for young researchers to actively engage in research discussions, new research interests, research ethics and professional development.

Are you a machine learning enthusiast looking for a practical day to day application? Or are you just trying to incorporate machine learning software in your trading decisions? This book is your answer. While machine learning and finance have generally been seen as separate entities, this book looks at several applications of machine learning in the financial
world. Whether it is predicting the best time to buy a stock in a day trading scenario, or to determine the long term value of a stock; financial ratios and common sense have always been used as reliable indicators. But how do these compare about advanced machine learning algorithms like clustering and regression? When would be the best time to use these? While machine learning and finance have generally been seen as separate entities, this book looks at several applications of machine learning in the financial world. Whether it is predicting the best time to buy a stock in a day trading scenario, or to determine the long term value of a stock; financial ratios and common sense have always been used as reliable indicators. But how do these compare about advanced machine learning algorithms like clustering and regression? When would be the best time to use these?

What's Included In This Book:
- What is Financial Machine Learning
- Developing a Trading Strategy for Stocks
- Machine Learning to Determine Current Value of Stocks
- Optimal Time to Buy Stocks
- Machine Learning Algorithm to Predict When to Sell a Stock
- Determine Value of a Penny Stock
- Trading Automation Software

Conclusion

This book presents a compilation of selected papers from the first International Conference on Big Data Analysis and Deep Learning Applications (ICBDL 2018), and focuses on novel techniques in the fields of big data analysis, machine learning, system monitoring, image processing, conventional neural networks, communication, industrial information, and their applications. Readers will find insights to help them realize more efficient algorithms and systems used in real-life applications and contexts, making the book an essential reference guide for academic researchers, professionals, software engineers in the industry, and regulators of aviation authorities.

Project Report from the year 2018 in the subject Computer Science - Technical Computer Science, course: Computer Science, language: English, abstract: Modeling and Forecasting of the financial market have been an attractive topic to scholars and researchers from various academic fields. The financial market is an abstract concept where financial commodities such as stocks, bonds, and precious metals transactions happen between buyers and sellers. In the present scenario of the financial market world, especially in the stock market, forecasting the trend or the price of stocks using machine learning techniques and artificial neural networks are the most attractive issue to be investigated. As Giles explained, financial forecasting is an instance of signal processing problem which is difficult because of high noise, small sample size, non-stationary, and non-linearity. The noisy characteristics mean the incomplete information gap between past stock trading price and volume with a future price. The stock market is sensitive with the political and macroeconomic environment. However, these two kinds of information are too complex and unstable to gather. The above information that cannot be included in features are considered as noise. The sample size of financial data is determined by real-world transaction records. On one hand, a larger sample size refers a longer period of transaction
records; on the other hand, large sample size increases the uncertainty of financial environment during the 2 sample period. In this project, we use stock data instead of daily data in order to reduce the probability of uncertain noise, and relatively increase the sample size within a certain period of time. By non-stationarity, one means that the distribution of stock data is various during time changing. Non-linearity implies that feature correlation of different individual stocks is various. Efficient Market Hypothesis was developed by Burton G. Malkiel in 1991.

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 features a selection of articles from The 2019 International Conference on Information Technology & Systems (ICITS‘19), held at the Universidad de Las Fuerzas Armadas, in Quito, Ecuador, on 6th to 8th February 2019. ICIST is a global forum for researchers and practitioners to present and discuss recent findings and innovations, current trends, professional experiences and challenges of modern information technology and systems research, together with their technological development and applications. The main topics covered are: information and knowledge management; organizational models and information systems; software and systems modeling; software systems, architectures, applications and tools; multimedia systems and applications; computer networks, mobility and pervasive systems; intelligent and decision support systems; big data analytics and applications; human–computer interaction; ethics, computers & security; health informatics; information technologies in education; cybersecurity and cyber-defense; electromagnetics, sensors and antennas for security.

Copyright: dbd375244cad64bbc79fe052d2a9d38f