Machine Learning With Swift Artificial Intelligen

Control Charts and Machine Learning for Anomaly Detection in Manufacturing
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Harnessing AI, Machine Learning, and IoT for Intelligent Business
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Machine Learning and Data Analytics for Predicting, Managing, and Monitoring Disease
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Machine Learning Approach for Cloud Data Analytics in IoT
Machine Learning with Core ML
Digital Health Transformation with Blockchain and Artificial Intelligence
Artificial Communication
MACHINE LEARNING INTERPRETABILITY: EXPLAINING AI MODELS TO HUMANS
AI and Machine Learning for Coders
Machine Learning by Tutorials (Second Edition)
Machine Learning for Cyber Physical System
Practical Artificial Intelligence with Swift
Practical Artificial Intelligence with Swift
Machine Learning for Algorithmic Trading
Machine Learning for Kids
Machine Learning with Swift
MATLAB for Machine Learning
Handbook of Research on Machine Learning
Machine Learning, Advances in Computing, Renewable Energy and Communication
Machine Learning for Finance
Deep Learning for Coders with fastai and PyTorch
Proceedings of 4th International Conference on Artificial Intelligence and Smart Energy
Algorithms in Advanced Artificial Intelligence
Mastering Swift 5
Artificial Intelligence and Machine Learning in 2D/3D Medical Image Processing
AI Foundations of Deep Learning

Machine Learning-Based Modelling in Atomic Layer Deposition Processes
artificial Intelligence / Machine Learning In Marketing
Human and Machine Learning

MCGEE CERVANTES

Control Charts and Machine Learning for Anomaly Detection in Manufacturing "O'Reilly Media, Inc."
Leverage machine learning to design and back-test automated trading strategies for real-world markets using pandas, TA-Lib, scikit-learn, LightGBM, SpaCy, Gensim, TensorFlow 2, Zipline, backtrader, Alphalens, and pyfolio. Purchase of the print or Kindle book includes a free eBook in the PDF format. Key FeaturesDesign, train, and evaluate machine learning algorithms that underpin automated trading strategiesCreate a research and strategy development process to apply predictive modeling to trading decisionsLeverage NLP and deep learning to extract tradeable signals from market and alternative dataBook Description The explosive growth of digital data has boosted the demand for expertise in trading strategies that use machine learning (ML). This revised and expanded second edition enables you to build and evaluate sophisticated supervised, unsupervised, and reinforcement learning models. This book introduces end-to-end machine learning for the trading workflow, from the idea and feature engineering to model optimization, strategy design, and backtesting. It illustrates this by using examples ranging from linear models and tree-based ensembles to deep-learning techniques from cutting edge research. This edition shows how to work with market, fundamental, and alternative data, such as tick data, minute and daily bars, SEC filings, earnings call transcripts, financial news, or satellite images to generate tradeable signals. It illustrates how to engineer financial features or alpha factors that enable an ML model to predict returns from price data for US and international stocks and ETFs. It also shows how to assess the signal content of new features using Alphalens and SHAP values and includes a new appendix with over one hundred alpha factor examples. By the end, you will be proficient in translating ML model predictions into a trading strategy that operates at daily or intraday horizons, and in evaluating its performance. What you will learnLeverage market, fundamental, and alternative text and image dataResearch and evaluate alpha factors using statistics, Alphalens, and SHAP valuesImplement machine learning techniques to solve investment and trading problemsBacktest and evaluate trading strategies based on machine learning using Zipline and BacktraderOptimize portfolio risk and performance analysis using pandas, NumPy, and pyfolioCreate a pairs trading strategy based on cointegration for US equities and ETFsTrain a gradient boosting model to predict intraday returns using AlgoSeek's high-quality trades and quotes dataWho this book is for If you are a data analyst, data scientist, Python

developer, investment analyst, or portfolio manager interested in getting hands-on machine learning knowledge for trading, this book is for you. This book is for you if you want to learn how to extract value from a diverse set of data sources using machine learning to design your own systematic trading strategies. Some understanding of Python and machine learning techniques is required.

Machine Learning for Hackers No Starch Press

Learn Machine Learning!Machine learning is one of those topics that can be daunting at first blush. It's not clear where to start, what path someone should take and what APIs to learn in order to get started teaching machines how to learn.This is where Machine Learning by Tutorials comes in! In this book, we'll hold your hand through a number of tutorials, to get you started in the world of machine learning. We'll cover a wide range of popular topics in the field of machine learning, while developing apps that work on iOS devices.Who This Book Is ForThis books is for the intermediate iOS developer who already knows the basics of iOS and Swift development, but wants to understand how machine learning works.Topics covered in Machine Learning by TutorialsCoreML: Learn how to add a machine learning model to your iOS apps, and how to use iOS APIs to access it.Create ML: Learn how to create your own model using Apple's Create ML Tool.Turi Create and Keras: Learn how to tune parameters to improve your machine learning model using more advanced tools.Image Classification: Learn how to apply machine learning models to predict objects in an image.Convolutional Networks: Learn advanced machine learning techniques for predicting objects in an image with Convolutional Neural Networks (CNNs).Sequence Classification: Learn how you can use recurrent neural networks (RNNs) to classify motion from an iPhone's motion sensor.Text-to-text Transform: Learn how to use machine learning to convert bodies of text between two languages.By the end of this book, you'll have a firm understanding of what machine learning is, what it can and cannot do, and how you can use machine learning in your next app!

MATLAB Deep Learning CRC Press

This book introduces the latest research on advanced control charts and new machine learning approaches to detect abnormalities in the smart manufacturing process. By approaching anomaly detection using both statistics and machine learning, the book promotes interdisciplinary cooperation between the research communities, to jointly develop new anomaly detection approaches that are more suitable for the 4.0 Industrial Revolution. The book provides ready-to-use algorithms and parameter sheets, enabling readers to design advanced control charts and machine learning-based approaches for anomaly detection in manufacturing. Case studies are introduced in each chapter to help practitioners easily apply these tools to real-world manufacturing processes. The book is of interest to researchers, industrial experts, and postgraduate students in the fields of industrial engineering, automation, statistical learning, and

manufacturing industries. *Intelligent Internet of Things* IndraStra Global Data analytics is proving to be an ally for epidemiologists as they join forces with data scientists to address the scale of crises. Analytics examined from many sources can derive insights and be used to study and fight global outbreaks. Pandemic analytics is a modern way to combat a problem as old as humanity itself: the proliferation of disease. Machine Learning and Data Analytics for Predicting, Managing, and Monitoring Disease explores different types of data and discusses how to prepare data for analysis, perform simple statistical analyses, create meaningful data visualizations, predict future trends from data, and more by applying cutting edge technology such as machine learning and data analytics in the wake of the COVID-19 pandemic. Covering a range of topics such as mental health analytics during COVID-19, data analysis and machine learning using Python, and statistical model development and deployment, it is ideal for researchers, academicians, data scientists, technologists, data analysts, diagnosticians, healthcare professionals, computer scientists, and students. **Applications of Artificial Intelligence in Medical Imaging** Packt Publishing Ltd
Simulation and synthesis are core parts of the future of AI and machine learning. Consider: programmers, data scientists, and machine learning engineers can create the brain of a self-driving car without the car. Rather than use information from the real world, you can synthesize artificial data using simulations to train traditional machine learning models.That’s just the beginning. With this practical book, you’ll explore the possibilities of simulation- and synthesis-based machine learning and AI, concentrating on deep reinforcement learning and imitation learning techniques. AI and ML are increasingly data driven, and simulations are a powerful, engaging way to unlock their full potential. You'll learn how to: Design an approach for solving ML and AI problems using simulations with the Unity engine Use a game engine to synthesize images for use as training data Create simulation environments designed for training deep reinforcement learning and imitation learning models Use and apply efficient general-purpose algorithms for simulation-based ML, such as proximal policy optimization Train a variety of ML models using different approaches Enable ML tools to work with industry-standard game development tools, using PyTorch, and the Unity ML-Agents and Perception Toolkits
Introduction to Artificial Intelligence "O'Reilly Media, Inc."
Get started with MATLAB for deep learning and AI with this in-depth primer. In this book, you start with machine learning fundamentals, then move on to neural networks, deep learning, and then convolutional neural networks. In a blend of fundamentals and applications, MATLAB Deep Learning employs MATLAB as the underlying programming language and tool for the examples and case studies in this book. With this book, you'll be able to tackle some of today's real world big data, smart bots, and other complex data problems. You’ll see how

deep learning is a complex and more intelligent aspect of machine learning for modern smart data analysis and usage. What You'll Learn Use MATLAB for deep learning Discover neural networks and multi-layer neural networks Work with convolution and pooling layers Build a MNIST example with these layers Who This Book Is For Those who want to learn deep learning using MATLAB. Some MATLAB experience may be useful.

Machine Learning Projects for Mobile Applications

"O'Reilly Media, Inc."

Leverage the power of machine learning and Swift programming to build intelligent iOS applications with ease Key Features Implement effective machine learning solutions for your iOS applications Use Swift and Core ML to build and deploy popular machine learning models Develop neural networks for natural language processing and computer vision Book Description Machine learning as a field promises to bring increased intelligence to the software by helping us learn and analyse information efficiently and discover certain patterns that humans cannot. This book will be your guide as you embark on an exciting journey in machine learning using the popular Swift language. We'll start with machine learning basics in the first part of the book to develop a lasting intuition about fundamental machine learning concepts. We explore various supervised and unsupervised statistical learning techniques and how to implement them in Swift, while the third section walks you through deep learning techniques with the help of typical real-world cases. In the last section, we will dive into some hard core topics such as model compression, GPU acceleration and provide some recommendations to avoid common mistakes during machine learning application development. By the end of the book, you'll be able to develop intelligent applications written in Swift that can learn for themselves. What you will learn Learn rapid model prototyping with Python and Swift Deploy pre-trained models to iOS using Core ML Find hidden patterns in the data using unsupervised learning Get a deeper understanding of the clustering techniques Learn modern compact architectures of neural networks for iOS devices Train neural networks for image processing and natural language processing Who this book is for iOS developers who wish to create smarter iOS applications using the power of machine learning will find this book to be useful. This book will also benefit data science professionals who are interested in performing machine learning on mobile devices. Familiarity with Swift programming is all you need to get started with this book.

Practical Artificial Intelligence with Swift

IGI Global

A proposal that we think about digital technologies such as machine learning not in terms of artificial intelligence but as artificial communication. Algorithms that work with deep learning and big data are getting so much better at doing so many things that it makes us uncomfortable. How can a device know what our favorite songs are, or what we should write in an email? Have machines become too smart? In Artificial Communication, Elena Esposito argues that drawing this sort of analogy between

algorithms and human intelligence is misleading. If machines contribute to social intelligence, it will not be because they have learned how to think like us but because we have learned how to communicate with them. Esposito proposes that we think of “smart” machines not in terms of artificial intelligence but in terms of artificial communication. To do this, we need a concept of communication that can take into account the possibility that a communication partner may be not a human being but an algorithm—which is not random and is completely controlled, although not by the processes of the human mind. Esposito investigates this by examining the use of algorithms in different areas of social life. She explores the proliferation of lists (and lists of lists) online, explaining that the web works on the basis of lists to produce further lists; the use of visualization; digital profiling and algorithmic individualization, which personalize a mass medium with playlists and recommendations; and the implications of the “right to be forgotten.” Finally, she considers how photographs today seem to be used to escape the present rather than to preserve a memory.

Practical Deep Learning for Cloud, Mobile, and Edge Packt Publishing Ltd

If you're looking to make a career move from programmer to AI specialist, this is the ideal place to start. Based on Laurence Moroney's extremely successful AI courses, this introductory book provides a hands-on, code-first approach to help you build confidence while you learn key topics. You'll understand how to implement the most common scenarios in machine learning, such as computer vision, natural language processing (NLP), and sequence modeling for web, mobile, cloud, and embedded runtimes. Most books on machine learning begin with a daunting amount of advanced math. This guide is built on practical lessons that let you work directly with the code. You'll learn: How to build models with TensorFlow using skills that employers desire The basics of machine learning by working with code samples How to implement computer vision, including feature detection in images How to use NLP to tokenize and sequence words and sentences Methods for embedding models in Android and iOS How to serve models over the web and in the cloud with TensorFlow Serving

Harnessing AI, Machine Learning, and IoT for Intelligent Business Springer Nature

Master MATLAB tools for creating machine learning applications through effective code writing, guided by practical examples showcasing the versatility of machine learning in real-world applications Key Features Work with the MATLAB Machine Learning Toolbox to implement a variety of machine learning algorithms Evaluate, deploy, and operationalize your custom models, incorporating bias detection and pipeline monitoring Uncover effective approaches to deep learning for computer vision, time series analysis, and forecasting Purchase of the print or Kindle book includes a free PDF eBook Book DescriptionDiscover why the MATLAB programming environment is highly favored by researchers and math experts for machine learning with this guide which is designed to

enhance your proficiency in both machine learning and deep learning using MATLAB, paving the way for advanced applications. By navigating the versatile machine learning tools in the MATLAB environment, you'll learn how to seamlessly interact with the workspace. You'll then move on to data cleansing, data mining, and analyzing various types of data in machine learning, and visualize data values on a graph. As you progress, you'll explore various classification and regression techniques, skillfully applying them with MATLAB functions. This book teaches you the essentials of neural networks, guiding you through data fitting, pattern recognition, and cluster analysis. You'll also explore feature selection and extraction techniques for performance improvement through dimensionality reduction. Finally, you'll leverage MATLAB tools for deep learning and managing convolutional neural networks. By the end of the book, you'll be able to put it all together by applying major machine learning algorithms in real-world scenarios.What you will learn Discover different ways to transform data into valuable insights Explore the different types of regression techniques Grasp the basics of classification through Naive Bayes and decision trees Use clustering to group data based on similarity measures Perform data fitting, pattern recognition, and cluster analysis Implement feature selection and extraction for dimensionality reduction Harness MATLAB tools for deep learning exploration Who this book is for This book is for ML engineers, data scientists, DL engineers, and CV/NLP engineers who want to use MATLAB for machine learning and deep learning. A fundamental understanding of programming concepts is necessary to get started. *Artificial Intelligence in Medicine* Springer Nature A hands-on, application-based introduction to machine learning and artificial intelligence (AI) that guides young readers through creating compelling AI-powered games and applications using the Scratch programming language. 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, award-winning 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! As you work through the book 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 their accuracy. You'll turn your models into fun computer games and apps, and see what happens when they get confused by bad data. You'll build 13 projects step-by-step from the ground up, including: • Rock, Paper, Scissors game that recognizes your hand shapes • An app that recommends movies based on other movies that you like • A computer character that reacts to insults and compliments • An interactive virtual assistant (like Siri or Alexa) that obeys commands • An AI version

of Pac-Man, with a smart character that knows how to avoid ghosts NOTE: This book includes a Scratch tutorial for beginners, and step-by-step instructions for every project. Ages 12+
Sustainable IoT and Data Analytics Enabled Machine Learning Techniques and Applications Green Mountain Computing
Leverage the power of Apple's Core ML to create smart iOS apps Key Features Explore the concepts of machine learning and Apple's Core ML APIs Use Core ML to understand and transform images and videos Exploit the power of using CNN and RNN in iOS applications Book Description Core ML is a popular framework by Apple, with APIs designed to support various machine learning tasks. It allows you to train your machine learning models and then integrate them into your iOS apps. Machine Learning with Core ML is a fun and practical guide that not only demystifies Core ML but also sheds light on machine learning. In this book, you'll walk through realistic and interesting examples of machine learning in the context of mobile platforms (specifically iOS). You'll learn to implement Core ML for visual-based applications using the principles of transfer learning and neural networks. Having got to grips with the basics, you'll discover a series of seven examples, each providing a new use-case that uncovers how machine learning can be applied along with the related concepts. By the end of the book, you will have the skills required to put machine learning to work in their own applications, using the Core ML APIs What you will learn Understand components of an ML project using algorithms, problems, and data Master Core ML by obtaining and importing machine learning model, and generate classes Prepare data for machine learning model and interpret results for optimized solutions Create and optimize custom layers for unsupported layers Apply CoreML to image and video data using CNN Learn the qualities of RNN to recognize sketches, and augment drawing Use Core ML transfer learning to execute style transfer on images Who this book is for Machine Learning with Core ML is for you if you are an intermediate iOS developer interested in applying machine learning to your mobile apps. This book is also for those who are machine learning developers or deep learning practitioners who want to bring the power of neural networks in their iOS apps. Some exposure to machine learning concepts would be beneficial but not essential, as this book acts as a launchpad into the world of machine learning for developers.
Machine Learning and Data Analytics for Predicting, Managing, and Monitoring Disease Springer Nature
The most common form of severe dementia, Alzheimer's disease (AD), is a cumulative neurological disorder because of the degradation and death of nerve cells in the brain tissue, intelligence steadily declines and most of its activities are compromised in AD. Before diving into the level of AD diagnosis, it is essential to highlight the fundamental differences between conventional machine learning (ML) and deep learning (DL). This work covers a number of photo-preprocessing approaches

that aid in learning because image processing is essential for the diagnosis of AD. The most crucial kind of neural network for computer vision used in medical image processing is called a Convolutional Neural Network (CNN). The proposed study will consider facial characteristics, including expressions and eye movements using the diffusion model, as part of CNN’s meticulous approach to Alzheimer’s diagnosis. Convolutional neural networks were used in an effort to sense Alzheimer’s disease in its early stages using a big collection of pictures of facial expressions.

Practical Simulations for Machine Learning

"O'Reilly Media, Inc."

This volume takes the reader on a technological voyage of machine learning advancements, highlighting the systematic changes in algorithms, challenges, and constraints. The technological advancements in the ML arena have transformed and revolutionized several fields, including transportation, agriculture, finance, weather monitoring, and others. This book brings together researchers, authors, industrialists, and academicians to cover a vast selection of topics in ML, starting with the rudiments of machine learning approaches and going on to specific applications in healthcare and industrial automation. The book begins with an overview of the ethics, security and privacy issues, future directions, and challenges in machine learning as well as a systematic review of deep learning techniques and provides an understanding of building generative adversarial networks. Chapters explore predictive data analytics for health issues. The book also adds a macro dimension by highlighting the industrial applications of machine learning, such as in the steel industry, for urban information retrieval, in garbage detection, in measuring air pollution, for stock market predictions, for underwater fish detection, as a fake news predictor, and more.

Machine Learning Approach for Cloud Data Analytics in IoT

Springer Nature

Create and implement AI-based features in your Swift apps for iOS, macOS, tvOS, and watchOS. With this practical book, programmers and developers of all kinds will find a one-stop shop for AI and machine learning with Swift. Taking a task-based approach, you'll learn how to build features that use powerful AI features to identify images, make predictions, generate content, recommend things, and more. AI is increasingly essential for every developer-and you don't need to be a data scientist or mathematician to take advantage of it in your apps. Explore Swift-based AI and ML techniques for building applications. Learn where and how AI-driven features make sense. Inspect tools such as Apple's Python-powered Turi Create and Google's Swift for TensorFlow to train and build models. I: Fundamentals and Tools- Learn AI basics, our task-based approach, and discover how to build or find a dataset. II: Task Based AI- Build vision, audio, text, motion, and augmentation-related features; learn how to convert preexisting models. III: Beyond- Discover the theory behind task-based practice, explore AI and ML methods, and learn how you can build it all

from scratch ... if you want to.

Machine Learning with Core ML CRC Press
This book constitutes the refereed proceedings of the 19th International Conference on Artificial Intelligence in Medicine, AIME 2021, held as a virtual event, in June 2021. The 28 full papers presented together with 30 short papers were selected from 138 submissions. The papers are grouped in topical sections on image analysis; predictive modelling; temporal data analysis; unsupervised learning; planning and decision support; deep learning; natural language processing; and knowledge representation and rule mining.

Digital Health Transformation with Blockchain and Artificial Intelligence Lulu.com
Whether you're a software engineer aspiring to enter the world of deep learning, a veteran data scientist, or a hobbyist with a simple dream of making the next viral AI app, you might have wondered where to begin. This step-by-step guide teaches you how to build practical deep learning applications for the cloud, mobile, browsers, and edge devices using a hands-on approach. Relying on years of industry experience transforming deep learning research into award-winning applications, Anirudh Koul, Siddha Ganju, and Meher Kasam guide you through the process of converting an idea into something that people in the real world can use. Train, tune, and deploy computer vision models with Keras, TensorFlow, Core ML, and TensorFlow Lite Develop AI for a range of devices including Raspberry Pi, Jetson Nano, and Google Coral Explore fun projects, from Silicon Valley's Not Hotdog app to 40+ industry case studies Simulate an autonomous car in a video game environment and build a miniature version with reinforcement learning Use transfer learning to train models in minutes Discover 50+ practical tips for maximizing model accuracy and speed, debugging, and scaling to millions of users

Artificial Communication BPB Publications
Create and implement AI-based features in your Swift apps for iOS, macOS, tvOS, and watchOS. With this practical book, programmers and developers of all kinds will find a one-stop shop for AI and machine learning with Swift. Taking a task-based approach, you'll learn how to build features that use powerful AI features to identify images, make predictions, generate content, recommend things, and more. AI is increasingly essential for every developer—and you don't need to be a data scientist or mathematician to take advantage of it in your apps. Explore Swift-based AI and ML techniques for building applications. Learn where and how AI-driven features make sense. Inspect tools such as Apple's Python-powered Turi Create and Google's Swift for TensorFlow to train and build models. I: Fundamentals and Tools—Learn AI basics, our task-based approach, and discover how to build or find a dataset. II: Task Based AI—Build vision, audio, text, motion, and augmentation-related features; learn how to convert preexisting models. III: Beyond—Discover the theory behind task-based practice, explore AI and ML methods, and learn how you can build it all from scratch... if you want

to
MACHINE LEARNING INTERPRETABILITY: EXPLAINING AI MODELS TO HUMANS Academic Press
If you're an experienced programmer interested in crunching data, this book will get you started with machine learning—a toolkit of algorithms that enables computers to train themselves to automate useful tasks. Authors Drew Conway and John Myles White help you understand machine learning and statistics tools through a series of hands-on case studies, instead of a traditional math-heavy presentation. Each chapter focuses on a specific problem in machine learning, such as classification, prediction, optimization, and recommendation. Using the R programming language, you'll learn how to analyze sample datasets and write simple machine learning algorithms. Machine Learning for Hackers is ideal for programmers from any background, including business, government, and academic research. Develop a naïve Bayesian classifier to determine if an email is spam, based only on its text Use linear regression to predict the number of page views for the top 1,000 websites Learn optimization techniques by attempting to break a simple letter cipher Compare and contrast U.S. Senators statistically, based on their voting records Build a "whom to follow" recommendation system from Twitter data
AI and Machine Learning for Coders Springer Nature
The theory and practice of AI and ML in marketing saving time, money