

TEXTBOOKS GITHUB

TEXTBOOKS GITHUB HAS BECOME AN INCREASINGLY POPULAR TERM AMONG EDUCATORS, STUDENTS, AND DEVELOPERS IN THE REALM OF DIGITAL EDUCATION RESOURCES. GITHUB, PRIMARILY KNOWN AS A COLLABORATIVE PLATFORM FOR SOFTWARE DEVELOPMENT, HAS ALSO EMERGED AS A VITAL REPOSITORY FOR SHARING EDUCATIONAL MATERIALS, INCLUDING TEXTBOOKS. THIS ARTICLE DELVES INTO THE SIGNIFICANCE OF USING GITHUB FOR TEXTBOOKS, EXPLORES VARIOUS REPOSITORIES AVAILABLE, AND DISCUSSES THE ADVANTAGES AND CHALLENGES ASSOCIATED WITH THIS APPROACH TO ACADEMIC RESOURCES. FURTHERMORE, WE WILL LOOK AT HOW TO EFFECTIVELY SEARCH FOR TEXTBOOKS ON GITHUB, AND WHAT THE FUTURE HOLDS FOR THIS INNOVATIVE EDUCATIONAL METHOD.

- INTRODUCTION TO TEXTBOOKS ON GITHUB
- BENEFITS OF USING GITHUB FOR EDUCATIONAL MATERIALS
- POPULAR TEXTBOOK REPOSITORIES ON GITHUB
- SEARCHING FOR TEXTBOOKS ON GITHUB
- CHALLENGES OF USING GITHUB FOR TEXTBOOKS
- FUTURE OF TEXTBOOKS ON GITHUB
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INTRODUCTION TO TEXTBOOKS ON GITHUB

THE INTEGRATION OF TECHNOLOGY IN EDUCATION HAS LED TO INNOVATIVE METHODS OF DISTRIBUTING AND ACCESSING LEARNING RESOURCES. GITHUB SERVES AS A PLATFORM THAT NOT ONLY HOSTS CODE BUT ALSO OFFERS A MULTITUDE OF EDUCATIONAL MATERIALS. TEXTBOOKS ON GITHUB ARE OFTEN COLLABORATIVE EFFORTS, CREATED AND MAINTAINED BY EDUCATORS AND PROFESSIONALS FROM VARIOUS FIELDS. THIS COLLABORATIVE NATURE ALLOWS FOR THE CONTINUOUS IMPROVEMENT AND UPDATING OF CONTENT, REFLECTING THE LATEST DEVELOPMENTS IN VARIOUS DISCIPLINES.

TEXTBOOKS HOSTED ON GITHUB OFTEN COME IN VARIOUS FORMATS, INCLUDING MARKDOWN, L^AT_EX, AND PDFs, MAKING THEM ACCESSIBLE TO A BROAD AUDIENCE. USERS CAN CONTRIBUTE TO THESE RESOURCES BY SUGGESTING EDITS, REPORTING ISSUES, OR EVEN CREATING THEIR OWN VERSIONS. THIS OPEN-SOURCE APPROACH TO TEXTBOOKS ENHANCES ACCESSIBILITY AND ENCOURAGES A COMMUNITY-DRIVEN METHOD OF EDUCATION, WHERE LEARNERS AND EDUCATORS ALIKE CAN BENEFIT FROM SHARED KNOWLEDGE. AS WE EXPLORE THE BENEFITS, POPULAR REPOSITORIES, AND CHALLENGES ASSOCIATED WITH TEXTBOOKS ON GITHUB, WE WILL ALSO LOOK INTO EFFECTIVE SEARCH STRATEGIES FOR FINDING THESE VALUABLE RESOURCES.

BENEFITS OF USING GITHUB FOR EDUCATIONAL MATERIALS

UTILIZING GITHUB FOR TEXTBOOKS OFFERS SEVERAL ADVANTAGES THAT CAN ENHANCE THE EDUCATIONAL EXPERIENCE FOR BOTH STUDENTS AND EDUCATORS. THESE BENEFITS INCLUDE ACCESSIBILITY, COMMUNITY ENGAGEMENT, AND THE ABILITY TO KEEP CONTENT UP-TO-DATE.

ACCESSIBILITY

ONE OF THE MOST SIGNIFICANT BENEFITS OF TEXTBOOKS ON GITHUB IS THEIR ACCESSIBILITY. STUDENTS AND EDUCATORS CAN ACCESS A WEALTH OF RESOURCES FOR FREE, REDUCING THE FINANCIAL BURDEN ASSOCIATED WITH TRADITIONAL TEXTBOOKS.

FURTHERMORE, THE DIGITAL NATURE OF THESE MATERIALS MEANS THEY CAN BE ACCESSED FROM ANYWHERE WITH AN INTERNET CONNECTION, PROMOTING A MORE FLEXIBLE LEARNING ENVIRONMENT.

COMMUNITY ENGAGEMENT

THE OPEN-SOURCE MODEL OF GITHUB FOSTERS COMMUNITY ENGAGEMENT AND COLLABORATION. EDUCATORS CAN COLLABORATE ON CONTENT CREATION, ALLOWING FOR DIVERSE PERSPECTIVES AND EXPERTISE TO SHAPE THE MATERIAL. THIS COLLABORATIVE APPROACH NOT ONLY ENRICHES THE CONTENT BUT ALSO ENCOURAGES PEER LEARNING AND INTERACTION AMONG USERS.

UP-TO-DATE CONTENT

IN TRADITIONAL PUBLISHING, TEXTBOOKS CAN QUICKLY BECOME OUTDATED. HOWEVER, BECAUSE GITHUB ALLOWS FOR CONTINUOUS UPDATES, TEXTBOOKS CAN REFLECT THE LATEST RESEARCH AND DEVELOPMENTS IN THEIR RESPECTIVE FIELDS. CONTRIBUTORS CAN EASILY MAKE CHANGES, ADD NEW INFORMATION, AND RECTIFY ERRORS, ENSURING THAT THE MATERIALS REMAIN RELEVANT AND ACCURATE.

POPULAR TEXTBOOK REPOSITORIES ON GITHUB

THERE ARE NUMEROUS REPOSITORIES ON GITHUB DEDICATED TO EDUCATIONAL MATERIALS ACROSS VARIOUS DISCIPLINES. SOME POPULAR REPOSITORIES INCLUDE:

- **OPENSTAX:** A WELL-KNOWN SOURCE FOR FREE, PEER-REVIEWED, OPENLY LICENSED TEXTBOOKS DESIGNED FOR COLLEGE COURSES.
- **PROJECT GUTENBERG:** ALTHOUGH PRIMARILY A LITERATURE RESOURCE, IT INCLUDES NUMEROUS ACADEMIC TEXTS THAT CAN BE USEFUL FOR VARIOUS STUDIES.
- **CS50:** THE REPOSITORY FOR HARVARD'S INTRODUCTORY COMPUTER SCIENCE COURSE, FEATURING LECTURE NOTES, PROBLEM SETS, AND TEXTBOOKS.
- **MATHEMATICS:** A COLLECTION OF MATHEMATICS TEXTBOOKS AND RESOURCES THAT CATER TO DIFFERENT LEVELS OF EDUCATION.
- **DATA SCIENCE:** REPOSITORIES FOCUSING ON DATA SCIENCE TEXTBOOKS, RESOURCES, AND TUTORIALS FOR VARIOUS PROGRAMMING LANGUAGES.

EACH OF THESE REPOSITORIES OFFERS UNIQUE MATERIALS THAT CATER TO SPECIFIC ACADEMIC NEEDS, MAKING IT EASIER FOR STUDENTS AND EDUCATORS TO FIND RELEVANT RESOURCES.

SEARCHING FOR TEXTBOOKS ON GITHUB

TO EFFECTIVELY SEARCH FOR TEXTBOOKS ON GITHUB, USERS CAN UTILIZE VARIOUS STRATEGIES AND TOOLS AVAILABLE ON THE PLATFORM. HERE ARE SOME TIPS FOR OPTIMIZING YOUR SEARCH:

USING GITHUB'S SEARCH FUNCTIONALITY

GITHUB PROVIDES A POWERFUL SEARCH ENGINE THAT ALLOWS USERS TO FIND REPOSITORIES BASED ON SPECIFIC KEYWORDS. WHEN SEARCHING FOR TEXTBOOKS, USE RELEVANT TERMS SUCH AS "TEXTBOOK," "COURSE MATERIAL," OR SPECIFIC SUBJECT AREAS (E.G., "BIOLOGY TEXTBOOK"). ADDITIONALLY, UTILIZING FILTERS SUCH AS LANGUAGE, STARS, AND FORKS CAN HELP NARROW DOWN RESULTS.

EXPLORING TOPICS AND LABELS

MANY REPOSITORIES USE TOPICS AND LABELS TO CATEGORIZE THEIR CONTENT. BY EXPLORING THESE TOPICS, USERS CAN DISCOVER NEW REPOSITORIES RELATED TO THEIR INTERESTS. FOR EXAMPLE, SEARCHING FOR "OPEN TEXTBOOK" OR "EDUCATIONAL RESOURCES" CAN LEAD TO A VARIETY OF EDUCATIONAL MATERIALS.

PARTICIPATING IN THE COMMUNITY

ENGAGING WITH THE GITHUB COMMUNITY CAN ALSO ENHANCE YOUR ABILITY TO FIND RELEVANT TEXTBOOKS. FOLLOWING CONTRIBUTORS, PARTICIPATING IN DISCUSSIONS, AND EXPLORING FORKS OF POPULAR REPOSITORIES CAN LEAD TO DISCOVERING VALUABLE EDUCATIONAL RESOURCES THAT MAY NOT APPEAR IN STANDARD SEARCHES.

CHALLENGES OF USING GITHUB FOR TEXTBOOKS

WHILE THERE ARE NUMEROUS BENEFITS TO USING GITHUB FOR TEXTBOOKS, THERE ARE ALSO CHALLENGES THAT USERS MAY ENCOUNTER. UNDERSTANDING THESE CHALLENGES CAN HELP IN NAVIGATING THE PLATFORM MORE EFFECTIVELY.

QUALITY CONTROL

GIVEN THAT TEXTBOOKS ON GITHUB ARE OFTEN COMMUNITY-DRIVEN, QUALITY CONTROL CAN BE A CONCERN. UNLIKE TRADITIONAL PUBLISHERS, THERE MAY NOT BE A RIGOROUS REVIEW PROCESS FOR THE CONTENT. AS A RESULT, USERS NEED TO CRITICALLY EVALUATE THE CREDIBILITY AND ACCURACY OF THE MATERIALS THEY CHOOSE TO USE.

TECHNICAL BARRIERS

FOR SOME USERS, NAVIGATING GITHUB CAN BE TECHNICALLY CHALLENGING. UNDERSTANDING HOW TO CLONE REPOSITORIES, MAKE CONTRIBUTIONS, OR EVEN NAVIGATE THE PLATFORM CAN POSE A BARRIER FOR THOSE WHO ARE NOT FAMILIAR WITH VERSION CONTROL SYSTEMS OR CODING ENVIRONMENTS. PROVIDING RESOURCES OR TUTORIALS FOR NEW USERS CAN HELP MITIGATE THIS ISSUE.

INCONSISTENT FORMATS

TEXTBOOKS ON GITHUB MAY COME IN VARIOUS FORMATS, WHICH CAN CREATE INCONSISTENCIES IN HOW THE CONTENT IS PRESENTED. USERS MAY ENCOUNTER MARKDOWN FILES, PDFs, L^AT_EX DOCUMENTS, AND OTHERS, WHICH CAN COMPLICATE ACCESSIBILITY AND USABILITY. FAMILIARITY WITH THESE FORMATS IS ESSENTIAL FOR EFFECTIVE USE OF THE RESOURCES.

FUTURE OF TEXTBOOKS ON GITHUB

THE FUTURE OF TEXTBOOKS ON GITHUB LOOKS PROMISING AS MORE EDUCATORS AND INSTITUTIONS RECOGNIZE THE BENEFITS OF OPEN EDUCATIONAL RESOURCES (OER). THE TREND TOWARDS DIGITAL LEARNING AND THE PUSH FOR AFFORDABLE EDUCATIONAL MATERIALS ARE LIKELY TO DRIVE FURTHER ADOPTION OF GITHUB AS A PLATFORM FOR TEXTBOOKS.

AS TECHNOLOGY CONTINUES TO EVOLVE, WE CAN EXPECT ADVANCEMENTS IN USER EXPERIENCE AND ACCESSIBILITY ON PLATFORMS LIKE GITHUB. ADDITIONALLY, AS MORE INSTITUTIONS ADOPT OPEN-SOURCE MATERIALS, THE QUALITY AND QUANTITY OF TEXTBOOKS AVAILABLE ON GITHUB ARE LIKELY TO INCREASE, FOSTERING A CULTURE OF COLLABORATION AND INNOVATION IN EDUCATION.

CONCLUSION

TEXTBOOKS ON GITHUB REPRESENT A TRANSFORMATIVE SHIFT IN HOW EDUCATIONAL MATERIALS ARE CREATED, SHARED, AND UTILIZED. WITH THEIR ACCESSIBILITY, COMMUNITY-DRIVEN APPROACH, AND UP-TO-DATE CONTENT, THESE RESOURCES PROVIDE SIGNIFICANT BENEFITS FOR STUDENTS AND EDUCATORS ALIKE. WHILE CHALLENGES EXIST, THE CONTINUOUS GROWTH AND

DEVELOPMENT OF THIS PLATFORM SUGGEST A BRIGHT FUTURE FOR OPEN EDUCATIONAL RESOURCES. BY EMBRACING THIS NEW MODEL, WE CAN CREATE A MORE INCLUSIVE AND INNOVATIVE EDUCATIONAL LANDSCAPE.

FREQUENTLY ASKED QUESTIONS

Q: WHAT ARE THE ADVANTAGES OF USING TEXTBOOKS ON GITHUB COMPARED TO TRADITIONAL TEXTBOOKS?

A: TEXTBOOKS ON GITHUB OFFER SEVERAL ADVANTAGES, INCLUDING FREE ACCESS TO A WIDE RANGE OF EDUCATIONAL MATERIALS, CONTINUOUS UPDATES, AND THE OPPORTUNITY FOR COLLABORATIVE CONTRIBUTIONS FROM THE COMMUNITY. THIS MODEL ENCOURAGES PEER ENGAGEMENT AND ALLOWS FOR DIVERSE PERSPECTIVES IN CONTENT CREATION.

Q: HOW CAN I FIND TEXTBOOKS ON GITHUB?

A: TO FIND TEXTBOOKS ON GITHUB, UTILIZE THE SEARCH FUNCTIONALITY BY ENTERING RELEVANT KEYWORDS SUCH AS "TEXTBOOK" OR SPECIFIC SUBJECT AREAS. ADDITIONALLY, EXPLORE TOPICS AND LABELS ASSOCIATED WITH REPOSITORIES, AND ENGAGE WITH THE GITHUB COMMUNITY FOR RECOMMENDATIONS.

Q: ARE TEXTBOOKS ON GITHUB RELIABLE AND ACCURATE?

A: WHILE MANY TEXTBOOKS ON GITHUB ARE CREATED BY KNOWLEDGEABLE CONTRIBUTORS, THE QUALITY MAY VARY DUE TO THE OPEN-SOURCE NATURE OF THE PLATFORM. IT IS IMPORTANT TO CRITICALLY EVALUATE THE CREDIBILITY OF THE AUTHORS AND THE CONTENT BEFORE USE.

Q: CAN I CONTRIBUTE TO TEXTBOOKS I FIND ON GITHUB?

A: YES, GITHUB ENCOURAGES COLLABORATION. USERS CAN SUGGEST EDITS, REPORT ISSUES, OR FORK REPOSITORIES TO CREATE THEIR OWN VERSIONS. ENGAGING WITH THE COMMUNITY HELPS IMPROVE THE QUALITY OF THE EDUCATIONAL MATERIALS AVAILABLE.

Q: WHAT TYPES OF SUBJECTS ARE COVERED BY TEXTBOOKS ON GITHUB?

A: TEXTBOOKS ON GITHUB COVER A WIDE RANGE OF SUBJECTS, INCLUDING COMPUTER SCIENCE, MATHEMATICS, SCIENCE, HUMANITIES, AND ENGINEERING. THERE ARE REPOSITORIES DEDICATED TO VARIOUS DISCIPLINES, CATERING TO DIFFERENT EDUCATIONAL NEEDS.

Q: IS THERE A COST ASSOCIATED WITH ACCESSING TEXTBOOKS ON GITHUB?

A: NO, TEXTBOOKS ON GITHUB ARE TYPICALLY AVAILABLE FOR FREE, MAKING THEM AN ECONOMICAL OPTION FOR STUDENTS AND EDUCATORS SEEKING EDUCATIONAL RESOURCES.

Q: WHAT FORMATS DO TEXTBOOKS ON GITHUB COME IN?

A: TEXTBOOKS ON GITHUB CAN BE FOUND IN VARIOUS FORMATS SUCH AS MARKDOWN, L^AT_EX, PDFs, AND HTML. FAMILIARITY WITH THESE FORMATS CAN ENHANCE USABILITY AND ACCESSIBILITY.

Q: HOW DO I ENSURE I AM USING THE MOST CURRENT VERSION OF A TEXTBOOK ON GITHUB?

A: TO ENSURE YOU ARE USING THE MOST CURRENT VERSION, CHECK THE REPOSITORY'S COMMIT HISTORY AND LOOK FOR THE LATEST UPDATES. REGULAR CONTRIBUTORS OFTEN UPDATE CONTENT, SO FOLLOWING ACTIVE REPOSITORIES CAN HELP KEEP YOU INFORMED.

Q: WHAT CHALLENGES MIGHT I FACE WHEN USING TEXTBOOKS FROM GITHUB?

A: CHALLENGES MAY INCLUDE QUALITY CONTROL ISSUES DUE TO THE OPEN-SOURCE MODEL, TECHNICAL BARRIERS FOR USERS UNFAMILIAR WITH GITHUB, AND INCONSISTENCIES IN FORMAT ACROSS DIFFERENT TEXTBOOKS. EVALUATING THE CONTENT CRITICALLY AND SEEKING RESOURCES FOR NAVIGATION CAN HELP MITIGATE THESE CHALLENGES.

Q: WILL THE TREND OF USING GITHUB FOR TEXTBOOKS CONTINUE IN THE FUTURE?

A: YES, AS MORE EDUCATIONAL INSTITUTIONS RECOGNIZE THE BENEFITS OF OPEN EDUCATIONAL RESOURCES, THE TREND OF USING GITHUB FOR TEXTBOOKS IS LIKELY TO GROW. THIS SHIFT TOWARDS DIGITAL LEARNING AND ACCESSIBILITY WILL LIKELY FOSTER FURTHER INNOVATION IN EDUCATIONAL MATERIALS.

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textbooks github: Introducing GitHub Peter Bell, Brent Beer, 2014-11-11 If you're new to GitHub, this concise book shows you just what you need to get started and no more. It's perfect for project and product managers, stakeholders, and other team members who want to collaborate on a development project—whether it's to review and comment on work in progress or to contribute specific changes. It's also great for developers just learning GitHub. GitHub has rapidly become the default platform for software development, but it's also ideal for other text-based documents, from contracts to screenplays. This hands-on book shows you how to use GitHub's web interface to view projects and collaborate effectively with your team. Learn how and why people use GitHub to

collaborate View the status of a project—recent changes, outstanding work, and historic changes
Create and edit files through GitHub without learning Git Suggest changes to projects you don't
have permission to edit directly Use tools like issues, pull requests, and branches to specify and
collaborate on changes Create a new GitHub repository to control who has access to your project

textbooks github: Beginning Git and GitHub Mariot Tsitoara, 2024-04-03 Learn the fundamentals of version control through step-by-step tutorials that will teach you the ins-and-outs of Git. This updated version introduces Github workflows, and contains new chapters on how to make Git and GitHub truly yours, covers additional common problems and how to solve them, along with new features of Github pull requests. Divided into three parts – Version Control, Project Management and Teamwork – this book reveals what waits for you in the real world and how to resolve the problems you may run into. Once past the basics of Git, you'll see how to manage a software project, and finally how to utilize Git and GitHub to work effectively as a team. You'll examine how to plan, follow and execute a project with GitHub, and then apply those concepts to real-world situations. Workaround the pitfalls that most programmers fall into when driving a project with Git by using proven tactics to avoid them. You will also be taught the easiest and quickest ways to resolve merge conflicts. A lot of modern books on Git don't go into depth about non-technical topics. Beginning Git and GitHub is your complete guide to how Git and GitHub work in a professional team environment and will help you cover all the bases right at the start of your career. What You'll Learn Review basic and advanced concepts of Git Apply Project Management skills using GitHub Solve conflicts or, ideally, avoid them altogether Use advanced concepts for a more boosted workflow Who This book Is For New developers, developers that have never worked in a team environment before, developers with basic knowledge of Git or GitHub, or anyone who works with text documents.

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career or grow your business Implement best practices for GitHub privacy, security, and control Who this book is for This book is for software developers and engineers looking to master Git and GitHub for efficient code management, project collaboration, and streamlined workflows. Infrastructure engineers and system administrators will benefit from learning how to manage scripts and track infrastructure changes. Educators and trainers can use this guide to teach software development and prepare students for industry certifications. Aspiring developers and tech professionals will find it a valuable resource for building essential GitHub skills and advancing their software development careers.

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textbooks github: *Essential TypeScript 5, Third Edition* Adam Freeman, 2023-10-10 TypeScript is a popular superset of JavaScript that adds support for static typing. TypeScript's typing features, which will be instantly familiar to C# or Java programmers, help you reduce errors and improve the overall quality of your JavaScript code.--Page [4] of cover.

textbooks github: Federated Learning with Python Kiyoshi Nakayama PhD, George Jenö, 2022-10-28 Learn the essential skills for building an authentic federated learning system with Python and take your machine learning applications to the next level Key Features Design distributed systems that can be applied to real-world federated learning applications at scale Discover multiple aggregation schemes applicable to various ML settings and applications Develop a federated learning system that can be tested in distributed machine learning settings Book Description Federated learning (FL) is a paradigm-shifting technology in AI that enables and accelerates machine learning (ML), allowing you to work on private data. It has become a must-have solution for most enterprise

industries, making it a critical part of your learning journey. This book helps you get to grips with the building blocks of FL and how the systems work and interact with each other using solid coding examples. FL is more than just aggregating collected ML models and bringing them back to the distributed agents. This book teaches you about all the essential basics of FL and shows you how to design distributed systems and learning mechanisms carefully so as to synchronize the dispersed learning processes and synthesize the locally trained ML models in a consistent manner. This way, you'll be able to create a sustainable and resilient FL system that can constantly function in real-world operations. This book goes further than simply outlining FL's conceptual framework or theory, as is the case with the majority of research-related literature. By the end of this book, you'll have an in-depth understanding of the FL system design and implementation basics and be able to create an FL system and applications that can be deployed to various local and cloud environments. What you will learn

- Discover the challenges related to centralized big data ML that we currently face along with their solutions
- Understand the theoretical and conceptual basics of FL
- Acquire design and architecting skills to build an FL system
- Explore the actual implementation of FL servers and clients
- Find out how to integrate FL into your own ML application
- Understand various aggregation mechanisms for diverse ML scenarios
- Discover popular use cases and future trends in FL

Who this book is for This book is for machine learning engineers, data scientists, and artificial intelligence (AI) enthusiasts who want to learn about creating machine learning applications empowered by federated learning. You'll need basic knowledge of Python programming and machine learning concepts to get started with this book.

textbooks github: [A Developer's Guide to Cloud Apps Using Microsoft Azure](#) Hamida Rebai Trabelsi, Marc-Andre Laniel, 2023-02-17 Build and deploy modern and secure applications on Microsoft Azure by implementing best practices, patterns, and new technologies with this easy-to-follow guide Purchase of the print or Kindle book includes a free PDF eBook Key Features

- Learn various methods to migrate legacy applications to cloud using different Azure services
- Implement continuous integration and deployment as a best practice for DevOps and agile development
- Get started with building cloud-based applications using containers and orchestrators in different scenarios

Book Description Companies face several challenges during cloud adoption, with developers and architects needing to migrate legacy applications and build cloud-oriented applications using Azure-based technologies in different environments. A Developer's Guide to Cloud Apps Using Microsoft Azure helps you learn how to migrate old apps to Azure using the Cloud Adoption Framework and presents use cases, as well as build market-ready secure and reliable applications. The book begins by introducing you to the benefits of moving legacy apps to the cloud and modernizing existing ones using a set of new technologies and approaches. You'll then learn how to use technologies and patterns to build cloud-oriented applications. This app development book takes you on a journey through three major services in Azure, namely Azure Container Registry, Azure Container Instances, and Azure Kubernetes Service, which will help you build and deploy an application based on microservices. Finally, you'll be able to implement continuous integration and deployment in Azure to fully automate the software delivery process, including the build and release processes. By the end of this book, you'll be able to perform application migration assessment and planning, select the right Azure services, and create and implement a new cloud-oriented application using Azure containers and orchestrators. What you will learn

- Get to grips with new patterns and technologies used for cloud-native applications
- Migrate old applications and databases to Azure with ease
- Work with containers and orchestrators to automate app deployment
- Select the right Azure service for deployment as per the use cases
- Set up CI/CD pipelines to deploy apps and services on Azure DevOps
- Leverage Azure App Service to deploy your first application
- Build a containerized app using Docker and Azure Container Registry

Who this book is for This book is for cloud developers, software architects, system administrators, developers, and computer science students looking to understand the new role of the software architect or developer in the cloud world. Professionals looking to enhance their cloud and cloud-native programming concepts will also find this book useful. A sound background in C#, ASP.NET Core, and Visual

Studio (any recent version) and basic knowledge of cloud computing will be helpful.

textbooks github: [Simplifying Data Engineering and Analytics with Delta](#) Anindita Mahapatra, Doug May, 2022-07-29 Explore how Delta brings reliability, performance, and governance to your data lake and all the AI and BI use cases built on top of it Key Features • Learn Delta's core concepts and features as well as what makes it a perfect match for data engineering and analysis • Solve business challenges of different industry verticals using a scenario-based approach • Make optimal choices by understanding the various tradeoffs provided by Delta Book Description Delta helps you generate reliable insights at scale and simplifies architecture around data pipelines, allowing you to focus primarily on refining the use cases being worked on. This is especially important when you consider that existing architecture is frequently reused for new use cases. In this book, you'll learn about the principles of distributed computing, data modeling techniques, and big data design patterns and templates that help solve end-to-end data flow problems for common scenarios and are reusable across use cases and industry verticals. You'll also learn how to recover from errors and the best practices around handling structured, semi-structured, and unstructured data using Delta. After that, you'll get to grips with features such as ACID transactions on big data, disciplined schema evolution, time travel to help rewind a dataset to a different time or version, and unified batch and streaming capabilities that will help you build agile and robust data products. By the end of this Delta book, you'll be able to use Delta as the foundational block for creating analytics-ready data that fuels all AI/BI use cases. What you will learn • Explore the key challenges of traditional data lakes • Appreciate the unique features of Delta that come out of the box • Address reliability, performance, and governance concerns using Delta • Analyze the open data format for an extensible and pluggable architecture • Handle multiple use cases to support BI, AI, streaming, and data discovery • Discover how common data and machine learning design patterns are executed on Delta • Build and deploy data and machine learning pipelines at scale using Delta Who this book is for Data engineers, data scientists, ML practitioners, BI analysts, or anyone in the data domain working with big data will be able to put their knowledge to work with this practical guide to executing pipelines and supporting diverse use cases using the Delta protocol. Basic knowledge of SQL, Python programming, and Spark is required to get the most out of this book.

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how to utilize core Angular concepts such as components, directives, and services to get you ready for building frontend web apps. You'll then develop web components with Angular and go on to learn about advanced concepts such as dynamic components loading and state management with NgRx for achieving real-time performance. Later chapters will focus on recipes for effectively testing your Angular apps to make them fail-safe, before progressing to techniques for optimizing your app's performance. Finally, you'll create Progressive Web Apps (PWA) with Angular to provide an intuitive experience for users. By the end of this book, you'll be able to create full-fledged, professional-looking Angular apps and have the skills you need for frontend development. What you will learn

- Gain a better understanding of how components, services, and directives work in Angular
- Get to grips with creating Progressive Web Apps using Angular from scratch
- Build rich animations and add them to your Angular apps
- Manage your app's data reactivity using RxJS
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- Optimize the performance of your new and existing web apps
- Write fail-safe unit tests and end-to-end tests for your web apps using Jest and Cypress
- Get familiar with Angular CDK components for designing effective Angular components

Who this book is for This book is for intermediate-level Angular developers looking for actionable solutions to common problems in Angular enterprise development. Mobile developers using Angular will also find the recipes in this book useful. Working experience with JavaScript and TypeScript is necessary to understand the topics covered in this book more effectively.

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- Gain a deeper understanding of functional programming through practical examples
- Build a solid foundation in core FP concepts and see how they apply to Go code
- Discover how FP can improve the testability of your code base
- Apply functional design patterns for problem solving
- Understand when to choose and not choose FP concepts
- Discover the benefits of functional programming when dealing with concurrent code

Who this book is for If you are a Go engineer with a background in traditionally object-oriented languages such as Java or C++ and want to broaden your knowledge of functional programming, this book is for you.

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with the fundamental concepts, enhancing your expertise in geospatial analysis processes with the help of illustrations, basic formulas, and pseudocode for real-world applications. As you progress, you'll explore the vast and intricate geospatial technology ecosystem, featuring thousands of software libraries and packages, each offering unique capabilities and insights. This book also explores practical Python GIS geospatial applications, remote sensing data, elevation data, and the dynamic world of geospatial modeling. It emphasizes the predictive and decision-making potential of geospatial technology, allowing you to visualize complex natural world concepts, such as environmental conservation, urban planning, and disaster management to make informed choices. You'll also learn how to leverage Python to process real-time data and create valuable information products. By the end of this book, you'll have acquired the knowledge and techniques needed to build a complete geospatial application that can generate a report and can be further customized for different purposes.

What you will learn

- Automate geospatial analysis workflows using Python
- Understand the different formats in which geospatial data is available
- Unleash geospatial tech tools to create stunning visualizations
- Create thematic maps with Python tools such as PyShp, OGR, and the Python Imaging Library
- Build a geospatial Python toolbox for analysis and application development
- Unlock remote sensing secrets, detect changes, and process imagery
- Leverage ChatGPT for solving Python geospatial solutions
- Apply geospatial analysis to real-time data tracking and storm chasing

Who this book is for

This book is for Python developers, researchers, or analysts who want to perform geospatial modeling and GIS analysis with Python. Basic knowledge of digital mapping and analysis using Python or other scripting languages will be helpful.

textbooks github: Machine Learning Engineering with Python Andrew P. McMahon, 2021-11-05

Supercharge the value of your machine learning models by building scalable and robust solutions that can serve them in production environments

Key Features

- Explore hyperparameter optimization and model management tools
- Learn object-oriented programming and functional programming in Python to build your own ML libraries and packages
- Explore key ML engineering patterns like microservices and the Extract Transform Machine Learn (ETML) pattern with use cases

Book Description

Machine learning engineering is a thriving discipline at the interface of software development and machine learning. This book will help developers working with machine learning and Python to put their knowledge to work and create high-quality machine learning products and services. Machine Learning Engineering with Python takes a hands-on approach to help you get to grips with essential technical concepts, implementation patterns, and development methodologies to have you up and running in no time. You'll begin by understanding key steps of the machine learning development life cycle before moving on to practical illustrations and getting to grips with building and deploying robust machine learning solutions. As you advance, you'll explore how to create your own toolsets for training and deployment across all your projects in a consistent way. The book will also help you get hands-on with deployment architectures and discover methods for scaling up your solutions while building a solid understanding of how to use cloud-based tools effectively. Finally, you'll work through examples to help you solve typical business problems. By the end of this book, you'll be able to build end-to-end machine learning services using a variety of techniques and design your own processes for consistently performant machine learning engineering.

What you will learn

- Find out what an effective ML engineering process looks like
- Uncover options for automating training and deployment and learn how to use them
- Discover how to build your own wrapper libraries for encapsulating your data science and machine learning logic and solutions
- Understand what aspects of software engineering you can bring to machine learning
- Gain insights into adapting software engineering for machine learning using appropriate cloud technologies
- Perform hyperparameter tuning in a relatively automated way

Who this book is for

This book is for machine learning engineers, data scientists, and software developers who want to build robust software solutions with machine learning components. If you're someone who manages or wants to understand the production life cycle of these systems, you'll find this book useful. Intermediate-level knowledge of Python is necessary.

textbooks github: Hyperparameter Tuning with Python Louis Owen, 2022-07-29

Take your

machine learning models to the next level by learning how to leverage hyperparameter tuning, allowing you to control the model's finest details

Key Features

- Gain a deep understanding of how hyperparameter tuning works
- Explore exhaustive search, heuristic search, and Bayesian and multi-fidelity optimization methods
- Learn which method should be used to solve a specific situation or problem

Book Description Hyperparameters are an important element in building useful machine learning models. This book curates numerous hyperparameter tuning methods for Python, one of the most popular coding languages for machine learning. Alongside in-depth explanations of how each method works, you will use a decision map that can help you identify the best tuning method for your requirements. You'll start with an introduction to hyperparameter tuning and understand why it's important. Next, you'll learn the best methods for hyperparameter tuning for a variety of use cases and specific algorithm types. This book will not only cover the usual grid or random search but also other powerful underdog methods. Individual chapters are also dedicated to the three main groups of hyperparameter tuning methods: exhaustive search, heuristic search, Bayesian optimization, and multi-fidelity optimization. Later, you will learn about top frameworks like Scikit, Hyperopt, Optuna, NNI, and DEAP to implement hyperparameter tuning. Finally, you will cover hyperparameters of popular algorithms and best practices that will help you efficiently tune your hyperparameter. By the end of this book, you will have the skills you need to take full control over your machine learning models and get the best models for the best results. What you will learn

- Discover hyperparameter space and types of hyperparameter distributions
- Explore manual, grid, and random search, and the pros and cons of each
- Understand powerful underdog methods along with best practices
- Explore the hyperparameters of popular algorithms
- Discover how to tune hyperparameters in different frameworks and libraries
- Deep dive into top frameworks such as Scikit, Hyperopt, Optuna, NNI, and DEAP
- Get to grips with best practices that you can apply to your machine learning models right away

Who this book is for This book is for data scientists and ML engineers who are working with Python and want to further boost their ML model's performance by using the appropriate hyperparameter tuning method. Although a basic understanding of machine learning and how to code in Python is needed, no prior knowledge of hyperparameter tuning in Python is required.

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