

[DOC] Computer Science An Overview J Glenn Brookshear Rigide

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Computer Science-GLENN. BRYLOW BROOKSHEAR (DENNIS.) 2019-03-04

For Introduction to Computer Science courses. Surveys the breadth of computer science—with the depth needed to explore concepts Computer Science: An Overview is written for students of computer science as well as students from other disciplines. Its broad coverage and clear exposition are accessible to students from all backgrounds, encouraging a practical and realistic understanding of the subject. Written to provide students with a bottom-up, concrete-to-abstract foundation, this broad background exposes beginning computer science students to the breadth of the subject in which they are planning to major, and students from other disciplines to what they need to relate to the technical society in which they live. Individual chapters are independent, and can be covered in an order that suits instructor course needs with selected content marked as optional for the introductory course. With a new full-color design, each chapter in the 13th Edition has seen revisions, updates, and corrections from the previous editions. The text also continues to use Python to provide programming tools for exploration and experimentation. More than 1,000 questions and exercises, Chapter Review Problems, and Social Issues questions reinforce core concepts. The text's Companion Website extends resources to enhance the course.

Computer Science-J. Glenn Brookshear 1994

Now in its eighth edition, this book continues to provide a comprehensive, accessible, and up-to-date introduction to the dynamic field of computer science using a breadth-first approach. The table of contents and the text itself have been revised and expanded to reflect changes in the field, including the trend toward using Web and Internet Technology, the evolution of Objects, and the important growth in the field of databases. Specifically, chapter three from the previous edition has been expanded into two chapters. Chapter three will now only cover Operating Systems and the new chapter four will focus on Networks and the Internet. Anyone interested in gaining a thorough introduction to Computer Science.

Computer Science-J. Glenn Brookshear 2003

Computer Science: An Overview truly lives up to its title, providing an introduction to the entire computer science discipline. This broad coverage, combined with clear explanations, has made it the leading textbook for the beadh-first/CS0 course. The text is unique in that it avoids presenting topics from the perspective of any particular programming language. Moreover, the text communicates the dynamics of computer science by presenting topics in a historical perspective in which past developments, the current state of the art, and directions of research are discussed. The result is a balanced, realistic picture of computer science, including such topics as programming languages, operating systems, algorithms, software engineering, networking, database design, artificial intelligence, and machine architecture. This seventh edition has been thoroughly updated to discuss important trends in such areas as networking and the Internet, software engineering, and artificial intelligence. Topics added include open-source development, associative memory, XML, and C#. Thought-provoking discussions of ethical and legal issues revolving around computing are integrated into each chapter rather than being presented as separate, isolated topics.

Computer Science-J. Glenn Brookshear 2012

Computer Science: An Overview uses broad coverage and clear exposition to present a complete picture of the dynamic computer science field. Accessible to students from all backgrounds, Glenn Brookshear uses a language-independent context to encourage the development of a practical, realistic understanding of the field. An overview of each of the important areas of Computer Science (e.g. Networking, OS, Computer Architecture, Algorithms) provides students with a general level of proficiency for future courses. The Eleventh Edition features two new contributing authors (David Smith — Indiana University of PA; Dennis Brylow — Marquette University), new, modern examples, and updated coverage based on current technology.

Computer Science: An Overview PDF eBook. Global Edition-Glenn Brookshear 2015-03-18

For the Introduction to Computer Science course Computer Science: An Overview uses broad coverage and clear exposition to present a complete picture of the dynamic computer science field. Accessible to students from all backgrounds, Glenn Brookshear uses a language-independent context to encourage the development of a practical, realistic understanding of the field. An overview of each of the important areas of Computer Science provides students with a general level of proficiency for future courses. Teaching and Learning Experience This program will provide a better teaching and learning experience—for you and your students. It will help: Develop a Practical, Realistic Understanding of Computer Science: A language-independent overview of each of the important areas of Computer Science prepares students for future courses. Fit your Course Preferences: Individual chapters are independent and can be covered in an order that suits your course. Reinforce Core Concepts: More than 1000 Questions and Exercises, Chapter Review Problems, and Social Issues questions give students the opportunity to apply concepts. The full text downloaded to your computer. With eBooks you can: search for key concepts, words and phrases make highlights and notes as you study share your notes with friends Print 5 pages at a time Compatible for PCs and MACs No expiry (offline access will remain whilst the Bookshelf software is installed. eBooks are downloaded to your computer and accessible either offline through the VitalSource Bookshelf (available as a free download), available online and also via the iPad/Android app. When the eBook is purchased, you will receive an email with your access code. Simply go to http://bookshelf.vitalsource.com/ to download the FREE Bookshelf software. After installation, enter your access code for your eBook. Time limit The VitalSource products do not have an expiry date. You will continue to access your VitalSource products whilst you have your VitalSource Bookshelf installed.

Python Programming-John M. Zelle 2004

This book is suitable for use in a university-level first course in computing (CS1), as well as the increasingly popular course known as CS0. It is difficult for many students to master basic concepts in computer science and programming. A large portion of the confusion can be blamed on the complexity of the tools and materials that are traditionally used to teach CS1 and CS2. This textbook was written with a single overarching goal: to present the core concepts of computer science as simply as possible without being simplistic.

Introduction to Computation and Programming Using Python, second edition-John V. Guttag 2016-08-12

The new edition of an introductory text that teaches students the art of computational problem solving, covering topics ranging from simple algorithms to information visualization. This book introduces students with little or no prior programming experience to the art of computational problem solving using Python and various Python libraries, including PyLab. It provides students with skills that will enable them to make productive use of computational techniques, including some of the tools and techniques of data science for using computation to model and interpret data. The book is based on an MIT course (which became the most popular course offered through MIT's OpenCourseWare) and was developed for use not only in a conventional classroom but in in a massive open online course (MOOC). This new edition has been updated for Python 3, reorganized to make it easier to use for courses that cover only a subset of the material, and offers additional material including five new chapters. Students are introduced to Python and the basics of programming in the context of such computational concepts and techniques as exhaustive enumeration, bisection search, and efficient approximation algorithms. Although it covers such traditional topics as computational complexity and simple algorithms, the book focuses on a wide range of topics not found in most introductory texts, including information visualization, simulations to model randomness, computational techniques to understand data, and statistical techniques that inform (and misinform) as well as two related but relatively advanced topics: optimization problems and dynamic programming. This edition offers expanded material on statistics and machine learning and new chapters on Frequentist and Bayesian statistics.

Computer Science: A Very Short Introduction-Subrata Dasgupta 2016-03-07

Over the past sixty years, the spectacular growth of the technologies associated with the computer is visible for all to see and experience. Yet, the science underpinning this technology is less visible and little understood outside the professional computer science community. As a scientific discipline, computer science stands alongside the likes of molecular biology and cognitive science as one of the most significant new sciences of the post Second World War era. In this Very Short Introduction, Subrata Dasgupta sheds light on these lesser known areas and considers the conceptual basis of computer science. Discussing algorithms, programming, and sequential and parallel processing, he considers emerging modern ideas such as biological computing and cognitive modelling, challenging the idea of computer science as a science of the artificial. ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area. These pocket-sized books are the perfect way to get ahead in a new subject quickly. Our expert authors combine facts, analysis, perspective, new ideas, and enthusiasm to make interesting and challenging topics highly readable.

Computer Science-J. Glenn Brookshear 2019

For Introduction to Computer Science courses. Surveys the breadth of computer science-with the depth needed to explore concepts Computer Science: An Overview is written for students of computer science as well as students from other disciplines. Its broad coverage and clear exposition are accessible to students from all backgrounds, encouraging a practical and realistic understanding of the subject. Written to provide students with a bottom-up, concrete-to-abstract foundation, this broad background exposes beginning computer science students to the breadth of the subject in which they are p.

Quantum Computation and Quantum Information-Michael A. Nielsen 2000-10-23

First-ever comprehensive introduction to the major new subject of quantum computing and quantum information.

C++ Lab Manual for Computer Science-Mary P. Boelk 1997-02-01

Principles of Computer System Design-Jerome H. Saltzer 2009-05-21

Principles of Computer System Design is the first textbook to take a principles-based approach to the computer system design. It identifies, examines, and illustrates fundamental concepts in computer system design that are common across operating systems, networks, database systems, distributed systems, programming languages, software engineering, security, fault tolerance, and architecture. Through carefully analyzed case studies from each of these disciplines, it demonstrates how to apply these concepts to tackle practical system design problems. To support the focus on design, the text identifies and explains abstractions that have proven successful in practice such as remote procedure call, client/service organization, file systems, data integrity, consistency, and authenticated messages. Most computer systems are built using a handful of such abstractions. The text describes how these abstractions are implemented, demonstrates how they are used in different systems, and prepares the reader to apply them in future designs. The book is recommended for junior and senior undergraduate students in Operating Systems, Distributed Systems, Distributed Operating Systems and/or Computer Systems Design courses; and professional computer systems designers. Features: Concepts of computer system design guided by fundamental principles. Cross-cutting approach that identifies abstractions common to networking, operating systems, transaction systems, distributed systems, architecture, and software engineering. Case studies that make the abstractions real: naming (DNS and the URL); file systems (the UNIX file system); clients and services (NFS); virtualization (virtual machines); scheduling (disk arms); security (TLS). Numerous pseudocode fragments that provide concrete examples of abstract concepts. Extensive support. The authors and MIT OpenCourseWare provide on-line, free of charge, open educational resources, including additional chapters, course syllabi, board layouts and slides, lecture videos, and an archive of lecture schedules, class assignments, and design projects.

Computer Science Education Research-Sally Fincher 2014-04-21

This book provides an overview of how to approach computer science education research from a pragmatic perspective. It represents the diversity of traditions and approaches inherent in this interdisciplinary area, while also providing a structure within which to make sense of that diversity. It provides multiple 'entry points'- to literature, to methods, to topics Part One, 'The Field and the Endeavor', frames the nature and conduct of research in computer science education. Part Two, 'Perspectives and Approaches', provides a number of grounded chapters on particular topics or themes, written by experts in each domain. These chapters cover the following topics: * design * novice misconceptions * programming environments for novices * algorithm visualisation * a schema theory view on learning to program * critical theory as a theoretical approach to computer science education research Juxtaposed and taken together, these chapters indicate just how varied the perspectives and research approaches can be. These chapters, too, act as entry points, with illustrations drawn from published work.

An Introduction to Computational Learning Theory-Michael J. Kearns 1994-08-15

Emphasizing issues of computational efficiency, Michael Kearns and Umesh Vazirani introduce a number of central topics in computational learning theory for researchers and students in artificial intelligence, neural networks, theoretical computer science, and statistics. Emphasizing issues of computational efficiency, Michael Kearns and Umesh Vazirani introduce a number of central topics in computational learning theory for researchers and students in artificial intelligence, neural networks, theoretical computer science, and statistics. Computational learning theory is a new and rapidly expanding area of research that examines formal models of induction with the goals of discovering the common methods underlying efficient learning algorithms and identifying the computational impediments to learning. Each topic in the book has been chosen to elucidate a general principle, which is explored in a precise formal setting. Intuition has been emphasized in the presentation to make the material accessible to the nontheoretician while still providing precise arguments for the specialist. This balance is the result of new proofs of established theorems, and new presentations of the standard proofs. The topics covered include the motivation, definitions, and fundamental results, both positive and negative, for the widely studied L. G. Valiant model of Probably Approximately Correct Learning; Occam's Razor, which formalizes a relationship between learning and data compression; the Vapnik-

Chervonenkis dimension; the equivalence of weak and strong learning; efficient learning in the presence of noise by the method of statistical queries; relationships between learning and cryptography, and the resulting computational limitations on efficient learning; reducibility between learning problems; and algorithms for learning finite automata from active experimentation.

Foundations of Computer Science-Alfred V. Aho 1994-10-15

Foundations of Data Science-Avrim Blum 2020-01-31

Covers mathematical and algorithmic foundations of data science: machine learning, high-dimensional geometry, and analysis of large networks.

Computer Science Illuminated-Nell B. Dale 2013

This guide offers students an overview of computer science principles, and provides a solid foundation for those continuing their study in this dynamic and exciting discipline. New features of this edition include: a chapter on computer security providing readers with the latest information on preventing unauthorized access; types of malware and anti-virus software; protecting online information, including data collection issues with Facebook, Google, etc.; security issues with mobile and portable devices; a new section on cloud computing offering readers an overview of the latest way in which businesses and users interact with computers and mobile devices; a rewritten section on social networks including new data on Google+ and Facebook; updates to include HTML5; revised and updated Did You Know callouts are included in the chapter margins; revisions of recommendations by the ACM dealing with computer ethic issues. --

Studyguide for Computer Science-Cram101 Textbook Reviews 2013-05

Never HIGHLIGHT a Book Again! Virtually all testable terms, concepts, persons, places, and events are included. Cram101 Textbook Outlines gives all of the outlines, highlights, notes for your textbook with optional online practice tests. Only Cram101 Outlines are Textbook Specific. Cram101 is NOT the Textbook. Accompanys: 9780521673761

Valuepack:Introduction to Java Programming-Comprehensive Version/Computer Science:an Overview-Y. Daniel Liang 2007-07-19

This value pack consists of Introduction to Java Programming- Comprehensive Version, 6/e by Y Daniel Liang (ISBN:9780132221580); Computer Science: An Overview: International edition, 9/e by J. Glenn Brookshear (ISBN:9780321434456)

Unlocking the Clubhouse-Jane Margolis 2003-02-28

Understanding and overcoming the gender gap in computer science education. The information technology revolution is transforming almost every aspect of society, but girls and women are largely out of the loop. Although women surf the Web in equal numbers to men and make a majority of online purchases, few are involved in the design and creation of new technology. It is mostly men whose perspectives and priorities inform the development of computing innovations and who reap the lion's share of the financial rewards. As only a small fraction of high school and college computer science students are female, the field is likely to remain a "male clubhouse," absent major changes. In Unlocking the Clubhouse, social scientist Jane Margolis and computer scientist and educator Allan Fisher examine the many influences contributing to the gender gap in computing. The book is based on interviews with more than 100 computer science students of both sexes from Carnegie Mellon University, a major center of computer science research, over a period of four years, as well as classroom observations and conversations with hundreds of college and high school faculty. The interviews capture the dynamic details of the female computing experience, from the family computer kept in a brother's bedroom to women's feelings of alienation in college computing classes. The authors investigate the familial, educational, and institutional origins of the computing gender gap. They also describe educational reforms that have made a dramatic difference at Carnegie Mellon—where the percentage of women entering the School of Computer Science rose from 7% in 1995 to 42% in 2000—and at high schools around the country.

Artificial Intelligence with Python-Prateek Joshi 2017-01-27

Build real-world Artificial Intelligence applications with Python to intelligently interact with the world around you About This Book Step into the amazing world of intelligent apps using this comprehensive guide Enter the world of Artificial Intelligence, explore it, and create your own applications Work through simple yet insightful examples that will get you up and running with Artificial Intelligence in no time Who This Book Is For This book is for Python developers who want to build real-world Artificial Intelligence applications. This book is friendly to Python beginners, but being familiar with Python would be useful to play around with the code. It will also be useful for experienced Python programmers who are looking to use Artificial Intelligence techniques in their existing technology stacks. What You Will Learn Realize different classification and regression techniques Understand the concept of clustering and how to use it to automatically segment data See how to build an intelligent recommender system Understand logic programming and how to use it Build automatic speech recognition systems Understand the basics of heuristic search and genetic programming Develop games using Artificial Intelligence Learn how reinforcement learning works Discover how to build intelligent applications centered on images, text, and time series data See how to use deep learning algorithms and build applications based on it In Detail Artificial Intelligence is becoming increasingly relevant in the modern world where everything is driven by technology and data. It is used extensively across many fields such as search engines, image recognition, robotics, finance, and so on. We will explore various real-world scenarios in this book and you'll learn about various algorithms that can be used to build Artificial Intelligence applications. During the course of this book, you will find out how to make informed decisions about what algorithms to use in a given context. Starting from the basics of Artificial Intelligence, you will learn how to develop various building blocks using different data mining techniques. You will see how to implement different algorithms to get the best possible results, and will understand how to apply them to real-world scenarios. If you want to add an intelligence layer to any application that's based on images, text, stock market, or some other form of data, this exciting book on Artificial Intelligence will definitely be your guide! Style and approach This highly practical book will show you how to implement Artificial Intelligence. The book provides multiple examples enabling you to create smart applications to meet the needs of your organization. In every chapter, we explain an algorithm, implement it, and then build a smart application.

Mathematics for Computer Science-Eric Lehman 2017-03-08

This book covers elementary discrete mathematics for computer science and engineering. It emphasizes mathematical definitions and proofs as well as applicable methods. Topics include formal logic notation, proof methods; induction, well-ordering; sets, relations; elementary graph theory; integer congruences; asymptotic notation and growth of functions; permutations and combinations and counting principles; discrete probability. Further selected topics may also be covered, such as recursive definition and structural induction; state machines and invariants; recurrences; generating functions.

Computer Systems-J. Stanley Warford 2009-06-23

Completely revised and updated, Computer Systems, Fourth Edition offers a clear, detailed, step-by-step introduction to the central concepts in computer organization, assembly language, and computer architecture. Important Notice: The digital edition of this book is missing some of the images or content found in the physical edition.

Writing for Computer Science-Justin Zobel 2004-06-03

A complete update to a classic, respected resource Invaluable reference, supplying a comprehensive overview on how to undertake and present research

Programming and Problem Solving with C++-Nell Dale 2010-10-22

Based off the highly successful Programming and Problem Solving with C++ which Dale is famous for, comes the new Brief Edition, perfect for the one-term course. The text was motivated by the need for a text that covered only what instructors and students are able to move through in a single semester without sacrificing the breadth and detail necessary for the introductory programmer. The authors excite and engage students in the learning process with their accessible writing style, rich pedagogy, and relevant examples. This Brief Edition introduces the new Software Maintenance Case Studies element that teaches students how to read code in order to debug, alter, or enhance existing class or code segments.

Computer Science-J.Glenn Brookshear 1999-06-01

Design, Applications, and Maintenance of Cyber-Physical Systems-Rea, Pierluigi 2021-06-25

Cyber-physical systems (CPS) can be defined as systems in which physical objects are represented in the digital world and integrated with computation, storage, and communication capabilities and are connected to each other in a network. The goal in the use of the CPS is integrating the dynamics of the physical processes with those of the software and networking, providing abstractions and modelling, design, and analysis techniques for the integrated whole. The notion of CPS is linked to concepts of robotics and sensor networks with intelligent systems proper of computational intelligence leading the pathway. Recent advances in science and engineering improve the link between computational and physical elements by means of intelligent systems, increasing the adaptability, autonomy, efficiency, functionality, reliability, safety, and usability of cyber-physical systems. The potential of cyber-physical systems will spread to several directions, including but not limited to intervention, precision manufacturing, operations in dangerous or inaccessible environments, coordination, efficiency, Maintenance 4.0, and augmentation of human capabilities. Design, Applications, and Maintenance of Cyber-Physical Systems gives insights about CPS as tools for integrating the dynamics of the physical processes with those of software and networking, providing abstractions and modelling, design, and analysis techniques for their smart manufacturing interoperation. The book will have an impact upon the research on robotics, mechatronics, integrated intelligent multibody systems, Industry 4.0, production systems management and maintenance, decision support systems, and Maintenance 4.0. The chapters discuss not only the technologies involved in CPS but also insights into how they are used in various industries. This book is ideal for engineers, practitioners, researchers, academicians, and students who are interested in a deeper understanding of cyber-physical systems (CPS), their design, application, and maintenance, with a special focus on modern technologies in Industry 4.0 and Maintenance 4.0.

Encyclopedia of Information Science and Technology-Mehdi Khosrow-Pour 2009

"This set of books represents a detailed compendium of authoritative, research-based entries that define the contemporary state of knowledge on technology"--Provided by publisher.

Outlines and Highlights for Computer Science-Cram101 Textbook Reviews 2009-09

Never HIGHLIGHT a Book Again! Virtually all of the testable terms, concepts, persons, places, and events from the textbook are included. Cram101 Just the FACTS101 studyguides give all of the outlines, highlights, notes, and quizzes for your textbook with optional online comprehensive practice tests. Only Cram101 is Textbook Specific. Accompanys: 9780321524034 .

Stuck in the Shallow End-Jane Margolis 2010-02-26

An investigation into why so few African American and Latino high school students are studying computer science reveals the dynamics of inequality in American schools. The number of African Americans and Latino/as receiving undergraduate and advanced degrees in computer science is disproportionately low, according to recent surveys. And relatively few African American and Latino/a high school students receive the kind of institutional encouragement, educational opportunities, and preparation needed for them to choose computer science as a field of study and profession. In *Stuck in the Shallow End*, Jane Margolis looks at the daily experiences of students and teachers in three Los Angeles public high schools: an overcrowded urban high school, a math and science magnet school, and a well-funded school in an affluent neighborhood. She finds an insidious "virtual segregation" that maintains inequality. Two of the three schools studied offer only low-level, how-to (keyboarding, cutting and pasting) introductory computing classes. The third and wealthiest school offers advanced courses, but very few students of color enroll in them. The race gap in computer science, Margolis finds, is one example of the way students of color are denied a wide range of occupational and educational futures. Margolis traces the interplay of school structures (such factors as course offerings and student-to-counselor ratios) and belief systems—including teachers' assumptions about their students and students' assumptions about themselves. *Stuck in the Shallow End* is a story of how inequality is reproduced in America—and how students and teachers, given the necessary tools, can change the system.

Big Java Late Objects-Cay S. Horstmann 2012-02-01

This text is an unbound, binder-ready edition. Big Java: Late Objects is a comprehensive introduction to Java and computer programming, which focuses on the principles of programming, software engineering, and effective learning. It is designed for a two-semester first course in programming for computer science students.

Murach's C# 2012-Joel Murach 2013

A guide to the C# programming language covers such topics as object-oriented programming, creating database applications, and Windows 8 programming.

Computer Science-J. Glenn Brookshear 2005

Now in its eighth edition, this book continues to provide a comprehensive, accessible, and up-to-date introduction to the dynamic field of computer science using a breadth-first approach. The table of contents and the text itself have been revised and expanded to reflect changes in the field, including the trend toward using Web and Internet Technology, the evolution of Objects, and the important growth in the field of databases. Specifically, chapter three from the previous edition has been expanded into two chapters. Chapter three will now only cover Operating Systems and the new chapter four will focus on Networks and the Internet. Anyone interested in gaining a thorough introduction to Computer Science.

Introduction to Evolutionary Computing-Agoston E. Eiben 2013-03-14

The first complete overview of evolutionary computing, the collective name for a range of problem-solving techniques based on principles of biological evolution, such as natural selection and genetic inheritance. The text is aimed directly at lecturers and graduate and undergraduate students. It is also meant for those who wish to apply evolutionary computing to a particular problem or within a given application area. The book contains quick-reference information on the current state-of-the-art in a wide range of related topics, so it is of interest not just to evolutionary computing specialists but to researchers working in other fields.

Computer Science-J. Glenn Brookshear 2013

Computer Science: An Overview uses broad coverage and clear exposition to present a complete picture of the dynamic computer science field. Accessible to students from all backgrounds, Glenn Brookshear uses a language-independent context to encourage the development of a practical, realistic understanding of the field. An overview of each of the important areas of Computer Science (e.g. Networking, OS, Computer Architecture, Algorithms) provides students with a general level of proficiency for future courses. The Eleventh Edition features two new contributing authors (David Smith — Indiana Univ.

Introduction to Computational Science-Angela B. Shiflet 2014-03-30

Computational science is an exciting new field at the intersection of the sciences, computer science, and mathematics because much scientific investigation now involves computing as well as theory and experiment. This textbook provides students with a versatile and accessible introduction to the subject. It assumes only a background in high school algebra, enables instructors to follow tailored pathways through the material, and is the only textbook of its kind designed specifically for an introductory course in the computational science and engineering curriculum. While the text itself is generic, an accompanying website offers tutorials and files in a variety of software packages. This fully updated and expanded edition features two new chapters on agent-based simulations and modeling with matrices, ten new project modules, and an additional module on diffusion. Besides increased treatment of high-performance computing and its applications, the book also includes additional quick review questions with answers, exercises, and individual and team projects. The only introductory textbook of its kind—now fully updated and expanded Features two new chapters on agent-based simulations and modeling with matrices Increased coverage of high-performance computing and its applications Includes additional modules, review questions, exercises, and projects An online instructor's manual with exercise answers, selected project solutions, and a test bank and solutions (available only to professors) An online illustration package is available to professors

Invitation To Computer Science 4/e-G. Michael Schneider 2007

Inventing the Internet-Janet Abbate 2000-07-24

Janet Abbate recounts the key players and technologies that allowed the Internet to develop; but her main focus is always on the social and cultural factors that influenced the Internet's design and use. Since the late 1960s the Internet has grown from a single experimental network serving a dozen sites in the United States to a network of networks linking millions of computers worldwide. In *Inventing the Internet*, Janet Abbate recounts the key players and technologies that allowed the Internet to develop; but her main focus is always on the social and cultural factors that influenced the Internet's design and use. The story she unfolds is an often twisting tale of collaboration and conflict among a remarkable variety of players, including government and military agencies, computer scientists in academia and industry, graduate students, telecommunications companies, standards organizations, and network users. The story starts with the early networking breakthroughs formulated in Cold War think tanks and realized in the Defense Department's creation of the ARPANET. It ends with the emergence of the Internet and its rapid and seemingly chaotic growth. Abbate looks at how academic and military influences and attitudes shaped both networks; how the usual lines between producer and user of a technology were crossed with interesting and unique results; and how later users invented their own very successful applications, such as electronic mail and the World Wide Web. She concludes that such applications continue the trend of decentralized, user-driven development that has characterized the Internet's entire history and that the key to the Internet's success has been a commitment to flexibility and diversity, both in technical design and in organizational culture.

Structure and Interpretation of Computer Programs-Harold Abelson 1985

Describes the LISP programming language, and covers basic procedures, data, and modularity

Computational Fairy Tales-Jeremy Kubica 2012

Have you ever thought that computer science should include more dragons and wizards? *Computational Fairy Tales* introduces principles of computational thinking, illustrating high-level computer science concepts, the motivation behind them, and their application in a non-computer—fairy tale—domain. It's a quest that will take you from learning the basics of programming in a blacksmith's forge to fighting curses with recursion. Fifteen seers delivered the same prophecy, without so much as a single minstrel to lighten the mood: an unknown darkness threatens the kingdom. Suddenly, Princess Ann finds herself sent forth alone to save the kingdom. Leaving behind her home, family, and pet turtle Fido, Princess Ann must face goblin attacks, magical curses, arrogant scholars, an unpleasant oracle, and rude Boolean waiters. Along the way she must build a war chest of computational knowledge to survive the coming challenge.