Software Engineering By Puntambekar

The significance of big data can be observed in any decision-making process as it is often used for forecasting and predictive analytics. Additionally, big data can be used to build a holistic view of an enterprise through a collection and analysis of large data sets retrospectively. As the data deluge deepens, new methods for analyzing, comprehending, and making use of big data become necessary. Enterprise Big Data Engineering, Analytics, and Management presents novel methodologies and practical approaches to engineering, managing, and analyzing large-scale data sets with a focus on enterprise applications and implementation. Featuring essential big data concepts including data mining, artificial intelligence, and information extraction, this publication provides a platform for retargeting the current research available in the field. Data analysts, IT professionals, researchers, and graduate-level students will find the timely research presented in this publication essential to furthering their knowledge in the field.

Collaborative learning has become an increasingly important part of education, but the research supporting it is distributed across a wide variety of fields including social, cognitive, developmental, and educational psychology, instructional design, the learning sciences, educational technology, socio-cultural studies, and computer-supported collaborative learning. The goal of this book is to integrate theory and research across these diverse fields of study and, thereby, to forward our understanding of collaborative learning and its instructional applications. The book is structured into the following 4 sections: 1) Theoretical Foundations 2) Research Methodologies 3) Instructional Approaches and Issues and 4) Technology. Key features include the following: Comprehensive and Global – This is the first book to provide a comprehensive review of the widely scattered research on collaborative learning including the contributions of many international authors. Cross disciplinary – The field of collaborative learning is highly interdisciplinary drawing scholars from psychology, computer science, mathematics education, science education, and educational technology. Within psychology, the book brings together perspectives from cognitive, social, and developmental psychology as well as from the cross-disciplinary field of the learning sciences. Chapter Structure – To ensure consistency across the book, authors have organized their chapters around integrative themes and issues. Each chapter author summarizes the accumulated literature related to their chapter topic and identifies the strengths and weaknesses of the supporting evidence. Strong Methodology – Each chapter within the extensive methodology section describes a specific methodology, its underlying assumptions, and provide examples of its application. This book is appropriate for researchers and graduate level instructors in educational psychology, learning sciences, cognitive psychology, social psychology, computer science, educational technology, teacher education and the academic libraries serving them. It is also appropriate as a graduate level textbook in collaborative learning, computer-supported collaborative learning, cognition and instruction, educational technology, and learning sciences.

This textbook is designed to learn python programming from scratch. At the beginning of the book general problem solving concepts such as types of problems, difficulties in problem solving, and problem solving aspects are discussed. From this book, you will start learning the Python programming by knowing about the variables, constants, keywords, data types, indentation and various programming constructs. The most commonly used types such as Lists, Tuples, dictionaries are also discussed with necessary examples and illustrations. The book includes the concepts of functions, lambda functions, modules and strings. In the later part of this book the concept of object oriented programming using Python is discussed in detail. Finally how to handle files and directories using Python is discussed. At the end of book some sample programs in Python are given that are based on the programming constructs. Python will be most demanded language after Java in future. So learning Python is need for today's software professionals. This book serves the purpose of teaching Python programming in the simplest and easiest manner.

The Handbook of Design in Educational Technology provides up-to-date, comprehensive summaries and syntheses of recent research pertinent to the design of information and communication technologies to support learning. Readers can turn to this handbook for expert advice about each stage in the process of designing systems for use in educational settings; from theoretical foundations to the challenges of implementation, the process of evaluating the impact of the design and the manner in which it might be further developed and disseminated. The volume is organized into the following four sections: Theory, Design, Implementation, and Evaluation. The more than forty chapters reflect the international and interdisciplinary nature of the educational technology design research field.

JavaScript is an important scripting language for almost every modern web application. It is simple for beginners but complex when you build a full-scale application. The book is extremely user-friendly. It assumes no programming experience and helps the students to learn the JavaScript in step by step manner with the help of illustrative examples. The first two units cover the fundamental concepts of JavaScript such as variables, operators, control structures, arrays, functions and strings. In the third unit, the concept of form and event handling is discussed. This feature of JavaScript help us to design the interactive web page with graphical user interface. In the next subsequent chapter, the book demonstrates how to create and manage cookies, how to create browser history, implementation of form validation with the help of regular expressions, creating rollover effects and creating and handling frames. At the end, the book illustrates creation of banner, management of status bar and creation of slideshows using JavaScript. This book serves the purpose of teaching JavaScript in the simplest and easiest manner.

The International Handbook of the Learning Sciences is a comprehensive collection of international perspectives on this interdisciplinary field. In more than 50 chapters, leading experts synthesize past, current, and emerging theoretical and empirical directions for learning sciences research. The three sections of the handbook capture, respectively: foundational contributions from multiple disciplines and the ways in which the learning sciences has fashioned these into its own brand of use-oriented theory, design, and evidence; learning sciences approaches to designing, researching, and evaluating learning broadly construed; and the methodological diversity of learning sciences research, assessment, and analytic approaches. This pioneering collection is the definitive volume of international learning sciences scholarship and an essential text for scholars in this area.

This book offers a concise and easy-to-understand overview of facts and concepts in pelvic anatomy. Laparoscopy provides good vision in a limited field, which means that surgeons have to rely on their anatomical knowledge of what structures lie in the vicinity and which structures need to be preserved. Focusing on surgical anatomy, the book helps laparoscopic surgeons better understand the female pelvic structures so improve their surgical skills.

This book includes innovative research work presented at ICO'2018, the 1st International Conference on Intelligent Computing and Optimization, held in Pattaya, Thailand on October 4–5, 2018. The conference presented topics ranging from power quality, reliability, security assurance, cloud computing, smart cities, renewable energy, agro-engineering, smart vehicles, deep learning, block chain, power systems, AI, machine learning, manufacturing systems, and big-data analytics. This volume focuses on subjects related to innovative computing, uncertainty management and optimization approaches to real-world problems in big-data, smart cities, sustainability, meta-heuristics, cyber-security, IoTs, economics and finance, renewable energy, energy and electricity systems, and block chain. Presenting cutting-edge methodologies with real-world application problems and their solutions, the book is useful for researchers, managers, executives, students, academicians, practicing scientists, and decision makers from all around the globe. It offers the academic and the applied communities a compendium and a research resource with significant insights and inspiration for innovative scientific education, investigation and collaboration, to overcome "hard problems" among the emerging challenges today and in the future.

Innovative tools and techniques for the development and design of software systems are essential to the problem solving and planning of

software solutions. Software Design and Development: Concepts, Methodologies, Tools, and Applications brings together the best practices of theory and implementation in the development of software systems. This reference source is essential for researchers, engineers, practitioners, and scholars seeking the latest knowledge on the techniques, applications, and methodologies for the design and development of software systems.

"This reference is a broad, multi-volume collection of the best recent works published under the umbrella of computer engineering, including perspectives on the fundamental aspects, tools and technologies, methods and design, applications, managerial impact, social/behavioral perspectives, critical issues, and emerging trends in the field"--Provided by publisher.

This book uses meta-analysis to synthesize research on scaffolding and scaffolding-related interventions in STEM (science, technology, engineering, and mathematics) education. Specifically, the volume examines the extent to which study quality, assessment type, and scaffolding characteristics (strategy, intended outcome, fading schedule, scaffolding intervention, and paired intervention) influence cognitive student outcomes. It includes detailed descriptions of the theoretical foundations of scaffolding, scaffolding strategies that have been proposed to meet different intended learning outcomes in STEM, and associated efficacy information. Furthermore, the book describes assessment strategies and study designs which can be used to evaluate the influence of scaffolding, and suggests new fields in which scaffolding strategies that have proven efficacious may be used.

CD-ROM includes: Video introduction -- Book overview -- COCOMO II. 2000 software -- Tutorials -- Adobe Acrobat Reader installation package.

This book addresses basic and advanced concepts in software engineering and is intended as a textbook for an undergraduate-level engineering course. In addition to covering important concepts in software engineering, this book also addresses the perspective of decreasing the overall effort of writing quality software. It covers the entire spectrum of the software engineering life cycle starting from the requirement analysis until the implementation and maintenance of the project.

As technology continues to advance, it is critical for businesses to implement systems that can support the transformation of data into information that is crucial for the success of the company. Without the integration of data (both structured and unstructured) mining in business intelligence systems, invaluable knowledge is lost. However, there are currently many different models and approaches that must be explored to determine the best method of integration. Integration Challenges for Analytics, Business Intelligence, and Data Mining is a relevant academic book that provides empirical research findings on increasing the understanding of using data mining in the context of business intelligence and analytics systems. Covering topics that include big data, artificial intelligence, and decision making, this book is an ideal reference source for professionals working in the areas of data mining, business intelligence, and analytics; data scientists; IT specialists; managers; researchers; academicians; practitioners; and graduate students.

This book is composed of a selection of articles from The 2021 World Conference on Information Systems and Technologies (WorldCIST'21), held online between 30 and 31 of March and 1 and 2 of April 2021 at Hangra de Heroismo, Terceira Island, Azores, Portugal. WorldCIST is a global forum for researchers and practitioners to present and discuss recent results and innovations, current trends, professional experiences and challenges of modern information systems and technologies research, together with their technological development and applications. The main topics covered are: A) Information and Knowledge Management; B) Organizational Models and Information Systems; C) Software and Systems Modeling; D) Software Systems, Architectures, Applications and Tools; E) Multimedia Systems and Applications; F) Computer Networks, Mobility and Pervasive Systems; G) Intelligent and Decision Support Systems; H) Big Data Analytics and Applications; I) Human-computer Interaction; J) Ethics, Computers & Security; K) Health Informatics; L) Information Technologies in Education; M) Information Technologies in Radiocommunications; N) Technologies for Biomedical Applications.

Really? If this is what you think, then it's time to redo the thinking. Everyday life incidents appear bland, nut when observed carefully they are bound to invoke laughter and strong reactions at every turn. Life-O-Logy is a collection of twelve short stories, with each of them weaved aroung human traits, emotions and fallacies. As you identify yourself with each tale, you'll either sit back and laugh or stand up and retrospect. Life has enough of spice. Read on to discover it.

This textbook provides comprehensive introduction to scripting languages that are used for creating web based applications. The book is divided into five different sections. In the first section the book introduces web site basics, HTTP, HTML5 and CSS3. The second and third section is based on client side and server side scripting. In these sections, the client side scripting such as JavaScript, DHTML and JSON is introduced. The sever side programming includes Servlet programming and JSP. In this section Java Database Connectivity is introduced and Simple Web Applications based on database connectivity have been developed. The fourth section deals with PHP and XML. The last section includes introduction to AJAX and Web Services. A database driven web service is developed and explained in step by step manner. At the end of the book some sample programs based on various scripting languages are given. The books helps the reader to learn the internet programming in the most lucid way. Various programming examples discussed in this book will motivate the students to learn the subject.

Proceedings of: CSCL 2002 meeting in Boulder, Colorado, January 7-11, 2002.

Concurrent Engineering (CE) is based on the premise that different phases of a product's lifecycle should be conducted concurrently and initiated as early as possible within the Product Creation Process (PCP). It has become the substantive basic methodology in many industries, including automotive, aerospace, machinery, shipbuilding, consumer goods, process industry and environmental engineering. CE aims to increase the efficiency of the PCP and reduce errors in later phases while incorporating considerations for full lifecycle and through-life operations. This book presents the proceedings of the 22nd ISPE Inc. (International Society for Productivity Enhancement) International Conference on Concurrent Engineering (CE2015) entitled 'Transdisciplinary Lifecycle Analysis of Systems', and held in Delft, the Netherlands, in July 2015. It is the second in the series 'Advances in Transdisciplinary Engineering'. The book includes 63 peer reviewed papers and 2 keynote speeches arranged in 10 sections: keynote speeches; systems engineering; customization and variability management; production oriented design, maintenance and repair; design methods and knowledge-based engineering; multidisciplinary product management; sustainable product development; service oriented design; product lifecycle management; and trends in CE. Containing papers ranging from the theoretical and conceptual to the highly pragmatic, this book will be of interest to all engineering professionals and practitioners; researchers,

designers and educators.

This book covers the object oriented programming aspects using Java programming. It focuses on developing the applications both at basic and moderate level. In this book there are number of illustrative programming examples that help the students to understand the concepts. Starting from introduction to Java programming, handling of control statements, arrays, objects and classes, this book moves gradually towards Exception handling, Interfaces, Collection classes and concurrent programming with the help of Java threads. In addition, the book also covers JAVAFX basics, Event driven programming, Animations, creating GUI applications and multimedia using JAVAFX. Explanation of all the object oriented programming concepts is given in simple and expressive language. Also, the Java programs are followed by step by step explanation. This book explains the object oriented programming concepts in such a way that even if the reader having no Java programming background can develop the applications with ease.

Software EngineeringTechnical PublicationsSoftware Engineering And Quality AssuranceSoftware EngineeringProgramming and Problem Solving using PythonTechnical Publications

"This book offers an examination of technology-based design, development, and collaborative tools for the classroom"--Provided by publisher.

This book offers a primer on the valuation of digital intangibles, a trending class of immaterial assets. Startups like successful unicorns, as well as consolidated firms desperately working to re-engineer their business models, are now trying to go digital and to reap higher returns by exploiting new intangibles. This book is innovative in its design and concept since it tackles a frontier topic with an original methodology, combining academic rigor with practical insights. Digital intangibles range from digitized versions of traditional immaterial assets (brands, patents, know-how, etc.) to more trendy applications like big data, Internet of Things, interoperable databases, artificial intelligence, digital newspapers, social networks, blockchains, FinTech applications, etc. This book comprehensively addresses related valuation issues, and demonstrates how best practices can be applied to specific asset appraisals, making it of interest to researchers, students, and practitioners alike.

Advanced Java is a textbook specially designed for undergraduate and post graduate students of Computer Science. It focuses on developing the applications both at basic and moderate level. This text book is divided into seven units. The first unit introduces Java network programming. In this unit along with the basic concepts of networking, the programming using Sockets, InetAddress, URL and URLConnection class is discussed in a lucid manner. The second unit is based on JDBC programming. In this unit, connecting with the database is discussed with examples and illustrations. Then next two chapters focuses on server side programming by means of Servlet programming and JSP. In third unit, the illustration of how to create and execute servlets is given. Then the concept of cookies and session management is discussed. In the next subsequent unit the Java Server Pages - its overview and programming is studied. In the last three units the advanced concepts of Java programming such as JSF, Hibernate and Java Web Framework : Spring is discussed. The contents of this textbook is supported with numerous illustrations, examples, program codes, and screenshots. With its lucid presentation and inclusion of numerous examples the book will be very useful for the readers.

This well-organized textbook provides the design techniques of algorithms in a simple and straight forward manner. The book begins with a description of the fundamental concepts such as algorithm, functions and relations, vectors and matrices. Then it focuses on efficiency analysis of algorithms. In this unit, the technique of computing time complexity of the algorithm is discussed along with illustrative examples. Gradually, the text discusses various algorithmic strategies such as divide and conquer, dynamic programming, Greedy algorithm, backtracking and branch and bound. Finally the string matching algorithms and introduction to NP completeness is discussed. Each algorithmic strategy is explained in stepwise manner, followed by examples and pseudo code. Thus this book helps the reader to learn the analysis and design of algorithms in the most lucid way.

In this book the authors introduce and explain many methods and models for the development of Information Systems (IS). It was written in large part to aid designers in designing successful devices/systems to match user needs in the field. Chief among these are website development, usability evaluation, quality evaluation and success assessment. The book provides great detail in order to assist readers' comprehension and understanding of both novel and refined methodologies by presenting, describing, explaining and illustrating their basics and working mechanics. Furthermore, this book presents many traditional methods and methodologies in an effort to make up a comprehensive volume on High Level Models and Methodologies for Information Systems. The target audience for this book is anyone interested in conducting research in IS planning and development. The book represents a main source of theory and practice of IS methods and methodologies applied to these realities. The book will appeal to a range of professions that are involved in planning and building the information systems, for example information technologists, information systems developers, as well as Web designers and developers—both researchers and practitioners; as a consequence, this book represents a genuinely multi-disciplinary approach to the field of IS methods and methodologies.

This book constitutes the proceedings of the first Asia Pacific Requirements Engineering Symposium, APRES 2014, held in Auckland, New Zealand, in April 2014. The 16 papers presented were carefully reviewed and selected from 30 submissions. The focus of the papers is on the following topics: novel ideas, methods, tools, and techniques for improving and enhancing Requirement Engineering products and processes.

Advanced Data Structures is a core subject in Computer Science. It includes a solid introduction to algorithms, data structures and uses C++ syntax and structure in the design of data structures. This textbook helps the students to make the transition from fundamentals of data structures to an advanced level of data structures and their applications. At the beginning, the non-linear data structures such as trees and graphs are discussed in the first two units. In the third unit, the concept of hashing is discussed. In this, the hashing methods, collision handling techniques, concept of dictionary

and skip lists are discussed. Next two units are based on search trees and multiway trees. These are basically the advanced level tree structures such as AVL trees, Optimal Binary Search Trees (OBST), B trees, B+ trees, Trie trees, Red-black trees, KD trees and AA trees. Sufficient number of examples and programming illustrations are supported for better understanding of the complex concepts in the simplest manner. Finally, the file organization is discussed, in which various file organization techniques and implementation is illustrated. The objective of this book is to enable students to have the much-needed foundation for advanced technical skill, leading to better problem-solving approach.

Christian Zagel presents a new way of innovating, measuring, and improving self-service systems for retail environments in the context of Customer Experience Management. He shows that technology is used to evoke positive emotions during the shopping experience to not only satisfy the consumer, but also to stimulate fascination for brands and their products. The author's findings illustrate that a customer's experience with a brand is not only determined by the products themselves, but rather by a combination of multiple experiences. Whilst there has been a notable rise in the number of sales channels, the ability to differentiate from competitors is still strongest where the brands have most influence: The physical point of sale.

The rapid development of information communication technologies (ICTs) is having a profound impact across numerous aspects of social, economic, and cultural activity worldwide, and keeping pace with the associated effects, implications, opportunities, and pitfalls has been challenging to researchers in diverse realms ranging from education to competitive intelligence.

The book has been developed to provide comprehensive and consistent coverage of both the concepts of data structures as well as implementation of these concepts using C programming. The book utilizes a systematic approach wherein each data structure is explained using examples followed by its implementation using a programming language. It begins with the introduction to data types. In this, an overview of various types of data structures is given and asymptotic notations, best case, worst case and average case time complexity is discussed. The book then focuses on the linear data structures such as arrays, stacks, queues and linked lists. In these units each concept is followed by its implementation and logic explanation part. The book then covers the non-linear data structures such as trees and graphs. These data structures are very well explained with the help of illustrative diagrams, examples and implementations. The text book then covers two important topics - hashing and file structures. While explaining the hashing - various hashing methods, and collision handling techniques are explained with necessary illustrations and examples. File structures are demonstrated by implementing sequential, index sequential and random file organization. Finally searching and sorting algorithms, their implementation and time complexities are discussed. The sorting and searching methods are illustrated systematically with the help of examples. The explanation in this book is in a very simple language along with clear and concise form which will help the students to have clear-cut understanding of the subject.

This book reviews the fundamentals, background and theoretical concepts of optimization principles in comprehensive manner along with their potentials applications and implementation strategies. The book will be very useful for wide spectrum of target readers such as research scholars, academia, and industry professionals.

A groundbreaking book in this field, Software Engineering Foundations: A Software Science Perspective integrates the latest research, methodologies, and their applications into a unified theoretical framework. Based on the author's 30 years of experience, it examines a wide range of underlying theories from philosophy, cognitive informatics, denota

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