

Prediksi Kelulusan Tepat Waktu Mahasiswa Menggunakan

Differential equations play a vital role in the fields of engineering and science. Problems in engineering and science can be modeled using ordinary or partial differential equations. Analytical solutions of differential equations may not be obtained easily, so numerical methods have been developed to handle them. Machine intelligence methods, such as Artificial Neural Networks (ANN), are being used to solve differential equations, and these methods are presented in *Artificial Neural Networks for Engineers and Scientists: Solving Ordinary Differential Equations*. This book shows how computation of differential equation becomes faster once the ANN model is properly developed and applied. The book focuses on different variants of decision tree induction but also describes the meta-learning approach in general which is applicable to other types of machine learning algorithms. The book discusses different variants of decision tree induction and represents a useful source of information to readers wishing to review some of the techniques used in decision tree learning, as well as different ensemble methods that involve decision trees. It is shown that the knowledge of different components used within decision tree learning needs to be systematized to enable the system to generate and evaluate different variants of machine learning algorithms with the aim of identifying the top-most performers or potentially the best one. A unified view of decision tree learning enables to emulate different decision tree algorithms simply by setting certain parameters. As meta-learning requires running many different processes with the aim of obtaining performance results, a detailed description of the experimental methodology and evaluation framework is provided. Meta-learning is discussed in great detail in the second half of the book. The exposition starts by presenting a comprehensive review of many meta-learning approaches explored in the past described in literature, including for instance approaches that provide a ranking of algorithms. The approach described can be related to other work that exploits planning whose aim is to construct data mining workflows. The book stimulates interchange of ideas between different, albeit related, approaches.

Includes bibliographical references and index.

Whether you are brand new to data mining or working on your tenth predictive analytics project, *Commercial Data Mining* will be there for you as an accessible reference outlining the entire process and related themes. In this book, you'll learn that your organization does not need a huge volume of data or a Fortune 500 budget to generate business using existing information assets. Expert author David Nettleton guides you through the process from beginning to end and covers everything from business objectives to data sources, and selection to analysis and predictive modeling. *Commercial Data Mining* includes case studies and practical examples from Nettleton's more than 20 years of commercial experience. Real-world cases covering customer loyalty, cross-selling, and audience prediction in industries including insurance, banking, and media illustrate the concepts and techniques explained throughout the book. Illustrates cost-benefit evaluation of potential projects Includes vendor-agnostic advice on what to look for in off-the-shelf solutions as well as tips on building your own data mining tools Approachable reference can be read from cover to cover by readers of all experience levels Includes practical examples and case studies as well as actionable business insights from author's own experience

Data mining yaitu suatu istilah yang digunakan untuk menemukan pengetahuan yang tersembunyi di dalam database. Tugas data mining sebenarnya adalah analisis otomatis atau semiotomatis jumlah besar data untuk mengekstrak pola yang menarik yang sebelumnya tidak diketahui seperti kelompok catatan data (analisis cluster), catatan yang tidak biasa (deteksi anomali) dan dependensi (aturan asosiasi

pertambahan). Hal ini biasanya melibatkan menggunakan teknik database seperti indeks spasial. Pola ini kemudian dapat dilihat sebagai semacam ringkasan dari input data, dan dapat digunakan dalam analisis lebih lanjut atau, misalnya, dalam pembelajaran mesin dan analisis prediktif. Misalnya, langkah data mining mungkin mengidentifikasi beberapa kelompok dalam data, yang kemudian dapat digunakan untuk memperoleh hasil prediksi yang lebih akurat oleh sistem pendukung keputusan. Baik pengumpulan data, penyusunan data, atau interpretasi hasil dan pelaporan merupakan bagian dari langkah data mining, tetapi milik proses KDD secara keseluruhan sebagai langkahlangkah tambahan.

The knowledge discovery process is as old as Homo sapiens. Until some time ago this process was solely based on the 'natural personal' computer provided by Mother Nature. Fortunately, in recent decades the problem has begun to be solved based on the development of the Data mining technology, aided by the huge computational power of the 'artificial' computers. Digging intelligently in different large databases, data mining aims to extract implicit, previously unknown and potentially useful information from data, since "knowledge is power". The goal of this book is to provide, in a friendly way, both theoretical concepts and, especially, practical techniques of this exciting field, ready to be applied in real-world situations. Accordingly, it is meant for all those who wish to learn how to explore and analysis of large quantities of data in order to discover the hidden nugget of information.

The main goal of the new field of data mining is the analysis of large and complex datasets. Some very important datasets may be derived from business and industrial activities. This kind of data is known as 'enterprise data'. The common characteristic of such datasets is that the analyst wishes to analyze them for the purpose of designing a more cost-effective strategy for optimizing some type of performance measure, such as reducing production time, improving quality, eliminating wastes, or maximizing profit. Data in this category may describe different scheduling scenarios in a manufacturing environment, quality control of some process, fault diagnosis in the operation of a machine or process, risk analysis when issuing credit to applicants, management of supply chains in a manufacturing system, or data for business related decision-making.

This book explains and explores the principal techniques of Data Mining, the automatic extraction of implicit and potentially useful information from data, which is increasingly used in commercial, scientific and other application areas. It focuses on classification, association rule mining and clustering. Each topic is clearly explained, with a focus on algorithms not mathematical formalism, and is illustrated by detailed worked examples. The book is written for readers without a strong background in mathematics or statistics and any formulae used are explained in detail. It can be used as a textbook to support courses at undergraduate or postgraduate levels in a wide range of subjects including Computer Science, Business Studies, Marketing, Artificial Intelligence, Bioinformatics and Forensic Science. As an aid to self study, this book aims to help general readers develop the necessary understanding of what is inside the 'black box' so they can use commercial data mining packages discriminately, as well as enabling advanced readers or academic researchers to understand or contribute to future technical advances in the field. Each chapter has practical exercises to enable readers to check their progress. A full glossary of technical terms used is included. This expanded third edition includes detailed descriptions of algorithms for classifying streaming data, both stationary data, where the underlying model is fixed, and data that is time-dependent, where the underlying model changes from time to time - a phenomenon known as concept drift.

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Computing Handbook, Third Edition: Computer Science and Software Engineering mirrors the modern taxonomy of computer science and software engineering as described by the Association for Computing Machinery (ACM) and the IEEE Computer Society (IEEE-CS). Written by established leading experts and influential young researchers, the first volume of this popular handbook examines the elements involved in designing and implementing software, new areas in which computers are being used, and ways to solve computing problems. The book also explores our current understanding of software engineering and its effect on the practice of software development and the education of software professionals. Like the second volume, this first volume describes what occurs in research laboratories, educational institutions, and public and private organizations to advance the effective development and use of computers and computing in today's world. Research-level survey articles provide deep insights into the computing discipline, enabling readers to understand the principles and practices that drive computing education, research, and development in the twenty-first century.

Business intelligence is a broad category of applications and technologies for gathering, providing access to, and analyzing data for the purpose of helping enterprise users make better business decisions. The term implies having a comprehensive knowledge of all factors that affect a business, such as customers, competitors, business partners, economic environment, and internal operations, therefore enabling optimal decisions to be made. Business Intelligence provides readers with an introduction and practical guide to the mathematical models and analysis methodologies vital to business intelligence. This book: Combines detailed coverage with a practical guide to the mathematical models and analysis methodologies of business intelligence. Covers all the hot topics such as data warehousing, data mining and its applications, machine learning, classification, supply optimization models, decision support systems, and analytical methods for performance evaluation. Is made accessible to readers through the careful definition and introduction of each concept, followed by the extensive use of examples and numerous real-life case studies. Explains how to utilise mathematical models and analysis models to make effective and good quality business decisions. This book is aimed at postgraduate students following data analysis and data mining courses. Researchers looking for a systematic and broad coverage of topics in operations research and mathematical models for decision-making will find this an invaluable guide.

Handbook of Educational Data Mining (EDM) provides a thorough overview of the current state of knowledge in this area. The first part of the book includes nine surveys and tutorials on the principal data mining techniques that have been applied in education. The second part presents a set of 25 case studies that give a rich overview of the problems that EDM has addressed. Researchers at the Forefront of the Field Discuss Essential Topics and the Latest Advances With contributions by well-known researchers from a variety of fields, the book reflects the multidisciplinary nature of the EDM community. It brings the educational and data mining communities together, helping education experts understand what types of questions EDM can address and helping data miners understand what types of questions are important to educational design and educational decision making. Encouraging readers to integrate EDM into their research and practice, this timely

handbook offers a broad, accessible treatment of essential EDM techniques and applications. It provides an excellent first step for newcomers to the EDM community and for active researchers to keep abreast of recent developments in the field.

Basic epidemiology provides an introduction to the core principles and methods of epidemiology, with a special emphasis on public health applications in developing countries. This edition includes chapters on the nature and uses of epidemiology; the epidemiological approach to defining and measuring the occurrence of health-related states in populations; the strengths and limitations of epidemiological study designs; and the role of epidemiology in evaluating the effectiveness and efficiency of health care. The book has a particular emphasis on modifiable environmental factors and encourages the application of epidemiology to the prevention of disease and the promotion of health, including environmental and occupational health.

Provides an in-depth and even treatment of the three pillars of computational intelligence and how they relate to one another This book covers the three fundamental topics that form the basis of computational intelligence: neural networks, fuzzy systems, and evolutionary computation. The text focuses on inspiration, design, theory, and practical aspects of implementing procedures to solve real-world problems. While other books in the three fields that comprise computational intelligence are written by specialists in one discipline, this book is co-written by current former Editor-in-Chief of IEEE Transactions on Neural Networks and Learning Systems, a former Editor-in-Chief of IEEE Transactions on Fuzzy Systems, and the founding Editor-in-Chief of IEEE Transactions on Evolutionary Computation. The coverage across the three topics is both uniform and consistent in style and notation. Discusses single-layer and multilayer neural networks, radial-basis function networks, and recurrent neural networks Covers fuzzy set theory, fuzzy relations, fuzzy logic interference, fuzzy clustering and classification, fuzzy measures and fuzzy integrals Examines evolutionary optimization, evolutionary learning and problem solving, and collective intelligence Includes end-of-chapter practice problems that will help readers apply methods and techniques to real-world problems Fundamentals of Computational intelligence is written for advanced undergraduates, graduate students, and practitioners in electrical and computer engineering, computer science, and other engineering disciplines.

Apply powerful Data Mining Methods and Models to Leverage your Data for Actionable Results Data Mining Methods and Models provides: * The latest techniques for uncovering hidden nuggets of information * The insight into how the data mining algorithms actually work * The hands-on experience of performing data mining on large data sets Data Mining Methods and Models: * Applies a "white box" methodology, emphasizing an understanding of the model structures underlying the software Walks the reader through the various algorithms and provides examples of the operation of the algorithms on actual large data sets, including a detailed case study, "Modeling Response to Direct-Mail Marketing" * Tests the reader's level of understanding of the concepts and methodologies, with over 110 chapter exercises * Demonstrates the Clementine data mining software suite, WEKA open source data mining software, SPSS statistical software, and Minitab statistical software * Includes a companion Web site, www.dataminingconsultant.com, where the data sets used in the book may be downloaded, along with a comprehensive set of data mining resources. Faculty adopters of the book have access to an array of helpful resources, including solutions to all exercises, a PowerPoint(r) presentation of each chapter, sample data mining course projects and accompanying data sets, and multiple-choice chapter quizzes. With its emphasis on learning by doing, this is an excellent textbook for students in business, computer science, and statistics, as well as a problem-solving reference for data analysts and professionals in the field. An Instructor's Manual presenting detailed solutions to all the problems in the book is available online.

Some say we live in the Information Age; others, the Social Age; and still others, the Big Data Age. Regardless of what name we give it, we

live in an age that generates monumental amounts of data-in all different kinds of formats. In business, and in our personal lives, we use smartphones and tablets, web sites and watches; with apps and interfaces to shop, learn, entertain and inform. Businesses increasingly use technology to interact with consumers to provide marketing, customer service, product information and more. All of this technological activity generates data, and we're increasingly good at gathering, storing and analyzing it. Data mining can help to identify interesting patterns and messages that exist in data, often hidden beneath the surface. In this modern age of information systems, it is easier than ever before to extract meaning from data. From classification to prediction, data mining can help. In *Data Mining for the Masses, Third Edition*, professor Matt North-a former risk analyst and software engineer at eBay-uses simple examples and clear explanations with free, powerful software tools to teach you the basics of data mining. In this Third Edition, implementations of these examples are offered in current versions of the RapidMiner software, and in the increasingly popular R Statistical Package. You've got more data than ever before and you know it's got value, if only you can figure out how to get to it. This book can show you how. Let's start digging!

"Learning My Salah" teaches you how to pray as Prophet Muhammad (peace and blessings be upon him) did. Indeed, his guidance is the most perfect. By following him, your prayers will be in the manner most pleasing to Allah, the Gracious.

Cowritten by Ralph Kimball, the world's leading data warehousing authority, whose previous books have sold more than 150,000 copies *Delivers* real-world solutions for the most time- and labor-intensive portion of data warehousing-data staging, or the extract, transform, load (ETL) process *Delineates* best practices for extracting data from scattered sources, removing redundant and inaccurate data, transforming the remaining data into correctly formatted data structures, and then loading the end product into the data warehouse *Offers* proven time-saving ETL techniques, comprehensive guidance on building dimensional structures, and crucial advice on ensuring data quality

This book discusses a comprehensive spectrum of software engineering techniques and shows how they can be applied in practical software projects. This edition features updated chapters on critical systems, project management and software requirements.

Put Predictive Analytics into Action Learn the basics of Predictive Analysis and Data Mining through an easy to understand conceptual framework and immediately practice the concepts learned using the open source RapidMiner tool. Whether you are brand new to Data Mining or working on your tenth project, this book will show you how to analyze data, uncover hidden patterns and relationships to aid important decisions and predictions. Data Mining has become an essential tool for any enterprise that collects, stores and processes data as part of its operations. This book is ideal for business users, data analysts, business analysts, business intelligence and data warehousing professionals and for anyone who wants to learn Data Mining. You'll be able to: 1. Gain the necessary knowledge of different data mining techniques, so that you can select the right technique for a given data problem and create a general purpose analytics process. 2. Get up and running fast with more than two dozen commonly used powerful algorithms for predictive

analytics using practical use cases. 3. Implement a simple step-by-step process for predicting an outcome or discovering hidden relationships from the data using RapidMiner, an open source GUI based data mining tool Predictive analytics and Data Mining techniques covered: Exploratory Data Analysis, Visualization, Decision trees, Rule induction, k-Nearest Neighbors, Naïve Bayesian, Artificial Neural Networks, Support Vector machines, Ensemble models, Bagging, Boosting, Random Forests, Linear regression, Logistic regression, Association analysis using Apriori and FP Growth, K-Means clustering, Density based clustering, Self Organizing Maps, Text Mining, Time series forecasting, Anomaly detection and Feature selection. Implementation files can be downloaded from the book companion site at

www.LearnPredictiveAnalytics.com Demystifies data mining concepts with easy to understand language Shows how to get up and running fast with 20 commonly used powerful techniques for predictive analysis Explains the process of using open source RapidMiner tools Discusses a simple 5 step process for implementing algorithms that can be used for performing predictive analytics Includes practical use cases and examples

This book is intended for anyone interested in advanced network analysis. If you wish to master the skills of analyzing and presenting network graphs effectively, then this is the book for you. No coding experience is required to use this book, although some familiarity with the Gephi user interface will be helpful.

Applications of Data Mining to Electronic Commerce brings together in one place important contributions and up-to-date research results in this fast moving area. Applications of Data Mining to Electronic Commerce serves as an excellent reference, providing insight into some of the most challenging research issues in the field.

Identifying some of the most influential algorithms that are widely used in the data mining community, The Top Ten Algorithms in Data Mining provides a description of each algorithm, discusses its impact, and reviews current and future research. Thoroughly evaluated by independent reviewers, each chapter focuses on a particular algorithm and is written by either the original authors of the algorithm or world-class researchers who have extensively studied the respective algorithm. The book concentrates on the following important algorithms: C4.5, k-Means, SVM, Apriori, EM, PageRank, AdaBoost, kNN, Naive Bayes, and CART. Examples illustrate how each algorithm works and highlight its overall performance in a real-world application. The text covers key topics—including classification, clustering, statistical learning, association analysis, and link mining—in data mining research and development as well as in data mining, machine learning, and artificial intelligence courses. By naming the leading algorithms in this field, this book encourages the use of data mining techniques in a broader realm of real-world applications. It should inspire more data mining researchers to further explore the impact and novel research issues of these algorithms.

Illustrating recent advances in data mining problems and encompassing both original research results and practical

development experience, this work contains papers from a September 2004 conference. Contributions from academia and industry are grouped in sections on text and web mining, techniques such as clustering and categorization, applications in business, industry, and government, and applications in customer relationship management. Material presented here will be of interest to researchers and application developers working in areas such as statistics, knowledge acquisition, data analysis, IT, data visualization, and business and industry. The US office of WIT Press is Computational Mechanics. Annotation : 2004 Book News, Inc., Portland, OR (booknews.com).

Algoritma C4.5 merupakan algoritma yang sering digunakan dalam pemecahan suatu masalah dan pengambilan keputusan dalam sebuah organisasi, instansi maupun lembaga. Topik masalah dalam buku ini adalah mengetahui kepuasan mahasiswa terhadap layanan akademik di perguruan tinggi yang berawal dari data responden mahasiswa. Penerapan metode data mining dengan algoritma decision tree c4.5 ini menjadikan data mahasiswa tersebut menjadi pola pohon keputusan sehingga dapat dijadikan sebagai aplikasi prediksi. Penerapan Algoritma C4.5 Untuk Prediksi Kepuasan Mahasiswa Tahun 2020 ini diterbitkan oleh Penerbit Deepublish dan tersedia juga dalam versi cetak.

Penerapan metode naive bayes dan skala likert pada aplikasi prediksi kelulusan mahasiswaKreatif

Buku ini berisi 203 halaman yang membahas tentang sebuah sistem dengan menerapkan metode knn. Buku ini dibuat untuk memudahkan pembaca dalam pembelajaran mengenai implementasi algoritma knn dalam memprediksi cuaca pada sebuah aplikasi, dalam buku ini terdapat penjelasan alur metode knn dan cara mengimplementasikannya pada sistem atau sebuah aplikasi prediksi cuaca.

Buku ini membahas tentang bagaimana penerapan metode naive bayes dan skala likert pada pembangunan aplikasi prediksi kelulusan mahasiswa. Aplikasi ini dimanfaatkan dalam proses prediksi kelulusan berdasarkan nilai akademik mahasiswa. Kegunaan aplikasi tidak berhenti pada proses prediksi saja namun berlanjut pada proses penanggulangan atas ketidaklulusan yang terjadi yaitu pemberian rekomendasi perbaikan nilai dan penilaian teman sejawat. Buku ini membahas lengkap dari software serta hardware yang dibutuhkan dan digunakan, proses pembuatan hingga contoh pemrogramannya juga digambarkan dengan baik sehingga mempermudah pembaca untuk memahami bahkan turut mengimplementasikan aplikasi serupa.

Secara garis besar buku ini diawali dengan pendahuluan, yang berisi tentang pengertian, pengelompokan, kebutuhan dan penerapan dari data mining. Selain itu juga terdapat ilmu-ilmu yang berkaitan dengan data mining dan membedakan data mining tanpa learning dan dengan learning. Bagian kedua dilakukan pembahasan mengenai knowledge data discovery dengan materi preprocessing, data warehouse dan OLAP. Bagian ketiga membahas tentang analisa asosiasi dengan rule mining dan prinsip apriori serta cara melakukan evaluasi. Selanjutnya dibahas masalah Clustering, dimana selain konsep, tipe dan hirarki dari cluster, serta metode clustering yang sering digunakan yaitu K-Means, Fuzzy C-Means dan KNN, juga diberikan contoh implementasi K-Means Clustering sesuai dengan penelitian yang pernah dilakukan penulis.

Data adalah kumpulan objek dan atributnya. Melalui sejumlah atribut yang menunjukkan karakteristik dari objek, suatu objek dapat digambarkan. Atribut juga dikenal sebagai fitur, variabel, field, atau karakteristik. Sebagai contoh pada data pelanggan, seorang pelanggan merupakan objek, di mana seorang pelanggan mempunyai ID, nama, dan alamat pelanggan yang merupakan atribut. Tujuan pembuatan buku ini adalah untuk menambah wawasan pembaca perihal data, jenis-jenis data, pengertian data mining, metode klasifikasi, metode cara

mengolah data menggunakan metode-metode yang ada di Data Mining, yaitu Principal Component Analysis, Decision Tree, Naïve Bayes, Support Vektor Machine, Association Rule, Clustering, deteksi anomali, dan penerapan metode-metode tersebut untuk membangun aplikasi. You're a computing or information student with a huge mountain to climb – that final-year research project. Don't worry, because with this book guardian angels are at hand, in the form of four brilliant academics who will guide you through the process. The book provides you with all the tools necessary to successfully complete a final year research project. Based on an approach that has been tried and tested on over 500 projects, it offers a simple step-by-step guide to the key processes involved. Not only that, but the book also contains lots of useful information for supervisors and examiners including guidelines on how to review a final year project.

Buku ini berisikan tentang bagaimana cara memonitoring atau melakukan pengawasan merupakan cara untuk dapat mengontrol, mengawasi serta mengecek sejumlah aktivitas pekerjaan yang telah dilakukan. Umumnya, monitoring digunakan dalam checking antara kinerja dan target yang telah ditentukan. Monitoring ditinjau dari hubungan terhadap manajemen kinerja adalah proses terintegrasi untuk memastikan bahwa proses berjalan sesuai rencana (on the track).

Buku ini membahas tentang "Algoritma C4.5 dan K-Nearest Neighbors (KNN) Untuk Memetakan Matakuliah dan Keterlambatan Kelulusan Mahasiswa". Kelulusan mahasiswa pada kategori tepat waktu mempunyai manfaat baik untuk per-guruan tinggi maupun bagi mahasiswa sendiri. Pada buku ini pengolahan data menggunakan bahasa pemrograman python. Algoritma C4.5 merupakan teknik klasifikasi pada machine learning yang digunakan pada proses data mining dengan membentuk sebuah pohon keputusan. K-NN merupakan algoritma sederhana yang menyimpan semua case yang tersedia dan mengklasifikasikan data atau casebaru berdasarkan ukuran kesamaan. Kami berharap dengan terbitnya buku ini memberikan manfaat yang besar bagi para pembaca baik dari mahasiswa, pengajar maupun masyarakat umum yang membutuhkan referensi dibidang memetakan matakuliah dan keterlambatan kelulusan mahasiswa menggunakan algoritma C4.5 dan K-NN menggunakan bahasa pemrograman python.

Six Sigma has taken the corporate world by storm and represents the thrust of numerous efforts in manufacturing and service organizations to improve products, services, and processes. Although Six Sigma brings a new direction to quality and productivity improvement, its underlying tools and philosophy are grounded in the fundamental principles of total quality and continuous improvement that have been used for many decades. Nevertheless, Six Sigma has brought a renewed interest in quality and improvement that few can argue with, and has kept alive the principles of total quality developed in the latter part of the 20th Century. AN INTRODUCTION TO SIX SIGMA AND PROCESS IMPROVEMENT, 2e shows students the essence and basics of Six Sigma, as well as how Six Sigma has brought a renewed interest in the principles of total quality to cutting-edge businesses. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

This book introduces readers to the fundamentals of artificial neural networks, with a special emphasis on evolutionary

algorithms. At first, the book offers a literature review of several well-regarded evolutionary algorithms, including particle swarm and ant colony optimization, genetic algorithms and biogeography-based optimization. It then proposes evolutionary version of several types of neural networks such as feed forward neural networks, radial basis function networks, as well as recurrent neural networks and multi-layer perceptron. Most of the challenges that have to be addressed when training artificial neural networks using evolutionary algorithms are discussed in detail. The book also demonstrates the application of the proposed algorithms for several purposes such as classification, clustering, approximation, and prediction problems. It provides a tutorial on how to design, adapt, and evaluate artificial neural networks as well, and includes source codes for most of the proposed techniques as supplementary materials. Laser-Assisted Microtechnology deals with laser applications to a wide variety of problems in microelectronic design and fabrication. It covers micromachining of thin films, microprocessing of materials, maskless laser micropatterning and laser-assisted synthesis of thin-film systems. The monograph describes fundamental aspects and practical details of the technological processes as well as the optimum conditions for their realization.

This book presents a flexible Bayesian framework for combining neural and cognitive models. Traditionally, studies in cognition and cognitive sciences have been done by either observing behavior (e.g., response times, percentage correct, etc.) or by observing neural activity (e.g., the BOLD response). These two types of observations have traditionally supported two separate lines of study, which are led by two different cognitive modelers. Joining neuroimaging and computational modeling in a single hierarchical framework allows the neural data to influence the parameters of the cognitive model and allows behavioral data to constrain the neural model. This Bayesian approach can be used to reveal interactions between behavioral and neural parameters, and ultimately, between neural activity and cognitive mechanisms. Chapters demonstrate the utility of this Bayesian model with a variety of applications, and feature a tutorial chapter where the methods can be applied to an example problem. The book also discusses other joint modeling approaches and future directions. Joint Models of Neural and Behavioral Data will be of interest to advanced graduate students and postdoctoral candidates in an academic setting as well as researchers in the fields of cognitive psychology and neuroscience.

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