

Sample Masters Research Proposal Electrical Engineering

Hispanic Engineer & Information Technology is a publication devoted to science and technology and to promoting opportunities in those fields for Hispanic Americans.

This book provides an account of the field of synchronized Phasor Measurement technology, its beginning, its technology and its principal applications. It covers wide Area Measurements (WAM) and their applications. The measurements are done using GPS systems and eventually will replace the existing technology. The authors created the field about twenty years ago and most of the installations planned or now in existence around the world are based on their work.

Tomorrow's Professor is designed to help you prepare for, find, and succeed at academic careers in science and engineering. It looks at the full range of North American four-year academic institutions while featuring 30 vignettes and more than 50 individual stories that bring to life the principles and strategies outlined in the book. Tailored for today's graduate students, postdocs, and beginning professors, Tomorrow's Professor: Presents a no-holds-barred look at the academic enterprise Describes a powerful preparation strategy to make you competitive for academic positions while maintaining your options for worthwhile careers in government and industry Explains how to get the offer you want and start-up package you need to help ensure success in your first critical years on the job Provides essential insights from experienced faculty on how to develop a rewarding academic career and a quality of life that is both balanced and fulfilling NEW Bonus material is available for free download at <http://booksupport.wiley.com> At a time when anxiety about academic career opportunities for Ph.D.s in these field is at an all-time high, Tomorrow's Professor provides a much-needed practical approach to career development.

How to Design, Write, and Present a Successful Dissertation Proposal, by Elizabeth A. Wentz, is essential reading for any graduate student entering the dissertation process in the social or behavioral sciences. The book addresses the importance of ethical scientific research, developing your curriculum vitae, effective reading and writing, completing a literature review, conceptualizing your research idea, and translating that idea into a realistic research proposal using research methods. The author also offers insight into oral presentations of the completed proposal, and the final chapter presents ideas for next steps after the proposal has been presented. Taking the view that we "learn by doing," the author provides Quick Tasks, Action Items, and To Do List activities throughout the text that, when combined, develop each piece of your research proposal. Designed primarily for quantitative or mixed methods research dissertations, this book is a valuable start-to-finish resource.

Over 19,000 total pages ... Public Domain U.S. Government published manual: Numerous illustrations and matrices. Published in the 1990s and after 2000. TITLES and CONTENTS: ELECTRICAL SCIENCES - Contains the following manuals: Electrical Science, Vol 1 - Electrical Science, Vol 2 - Electrical Science, Vol 3 - Electrical Science, Vol 4 - Thermodynamics, Heat Transfer, And Fluid Flow, Vol 1 - Thermodynamics, Heat Transfer, And Fluid Flow, Vol 2 - Thermodynamics, Heat Transfer, And Fluid Flow, Vol 3 - Instrumentation And Control, Vol 1 - Instrumentation And Control, Vol 2 Mathematics, Vol 1 - Mathematics, Vol 2 - Chemistry, Vol 1 - Chemistry, Vol 2 - Engineering Symbology, Prints, And Drawings, Vol 1 - Engineering Symbology, Prints, And Drawings, Vol 2 - Material Science, Vol 1 - Material Science, Vol 2 - Mechanical Science, Vol 1 - Mechanical Science, Vol 2 - Nuclear Physics And Reactor Theory, Vol 1 - Nuclear Physics And Reactor Theory, Vol 2. CLASSICAL PHYSICS - The Classical Physics Fundamentals includes information on the units used to measure physical properties; vectors, and how they are used to show the net effect of various forces; Newton's Laws of motion, and how to use these laws in force and motion applications; and the concepts of energy, work, and power, and how to measure and calculate the energy involved in various applications. * Scalar And Vector Quantities * Vector Identification * Vectors: Resultants And Components * Graphic Method Of Vector Addition * Component Addition Method * Analytical Method Of Vector Addition * Newton's Laws Of Motion * Momentum Principles * Force And Weight * Free-Body Diagrams * Force Equilibrium * Types Of Force * Energy And Work * Law Of Conservation Of Energy * Power – ELECTRICAL SCIENCE: The Electrical Science Fundamentals Handbook includes information on alternating current (AC) and direct current (DC) theory, circuits, motors, and generators; AC power and reactive components; batteries; AC and DC voltage regulators; transformers; and electrical test instruments and measuring devices. * Atom And Its Forces * Electrical Terminology * Units Of Electrical Measurement * Methods Of Producing Voltage (Electricity) * Magnetism * Magnetic Circuits * Electrical Symbols * DC Sources * DC Circuit Terminology * Basic DC Circuit Calculations * Voltage Polarity And Current Direction * Kirchhoff's Laws * DC Circuit Analysis * DC Circuit Faults * Inductance * Capacitance * Battery Terminology * Battery Theory * Battery Operations * Types Of Batteries * Battery Hazards * DC Equipment Terminology * DC Equipment Construction * DC Generator Theory * DC Generator Construction * DC Motor Theory * Types Of DC Motors * DC Motor Operation * AC Generation * AC Generation Analysis * Inductance * Capacitance * Impedance * Resonance * Power Triangle * Three-Phase Circuits * AC Generator Components * AC Generator Theory * AC Generator Operation * Voltage Regulators * AC Motor Theory * AC Motor Types * Transformer Theory * Transformer Types * Meter Movements * Voltmeters * Ammeters * Ohm Meters * Wattmeters * Other Electrical Measuring Devices * Test Equipment * System Components And Protection Devices * Circuit Breakers * Motor Controllers * Wiring Schemes And Grounding THERMODYNAMICS, HEAT TRANSFER AND FLUID FUNDAMENTALS. The Thermodynamics, Heat Transfer, and Fluid Flow Fundamentals Handbook includes information on thermodynamics and the properties of fluids; the three modes of heat transfer - conduction, convection, and radiation; and fluid flow, and the energy relationships in fluid systems. * Thermodynamic Properties * Temperature And Pressure Measurements * Energy, Work, And Heat * Thermodynamic Systems And Processes * Change Of Phase * Property Diagrams And Steam Tables * First Law Of Thermodynamics * Second Law Of Thermodynamics * Compression Processes * Heat Transfer Terminology * Conduction Heat Transfer * Convection Heat Transfer * Radiant Heat Transfer * Heat Exchangers * Boiling Heat Transfer * Heat Generation * Decay Heat * Continuity Equation * Laminar And Turbulent Flow * Bernoulli's Equation * Head Loss * Natural Circulation * Two-Phase Fluid Flow * Centrifugal Pumps INSTRUMENTATION AND CONTROL. The Instrumentation and Control Fundamentals Handbook includes information on temperature, pressure, flow, and level detection systems; position indication systems; process control systems; and radiation detection principles. * Resistance Temperature Detectors (Rtds) * Thermocouples * Functional Uses Of Temperature Detectors * Temperature Detection Circuitry * Pressure Detectors * Pressure Detector Functional Uses * Pressure Detection Circuitry * Level Detectors * Density Compensation * Level Detection Circuitry * Head Flow Meters * Other Flow Meters * Steam Flow Detection * Flow Circuitry * Synchro Equipment *

Switches * Variable Output Devices * Position Indication Circuitry * Radiation Detection Terminology * Radiation Types * Gas-Filled Detector * Detector Voltage * Proportional Counter * Proportional Counter Circuitry * Ionization Chamber * Compensated Ion Chamber * Electroscopie Ionization Chamber * Geiger-Müller Detector * Scintillation Counter * Gamma Spectroscopy * Miscellaneous Detectors * Circuitry And Circuit Elements * Source Range Nuclear Instrumentation * Intermediate Range Nuclear Instrumentation * Power Range Nuclear Instrumentation * Principles Of Control Systems * Control Loop Diagrams * Two Position Control Systems * Proportional Control Systems * Reset (Integral) Control Systems * Proportional Plus Reset Control Systems * Proportional Plus Rate Control Systems * Proportional-Integral-Derivative Control Systems * Controllers * Valve Actuators MATHEMATICS The Mathematics Fundamentals Handbook includes a review of introductory mathematics and the concepts and functional use of algebra, geometry, trigonometry, and calculus. Word problems, equations, calculations, and practical exercises that require the use of each of the mathematical concepts are also presented. * Calculator Operations * Four Basic Arithmetic Operations * Averages * Fractions * Decimals * Signed Numbers * Significant Digits * Percentages * Exponents * Scientific Notation * Radicals * Algebraic Laws * Linear Equations * Quadratic Equations * Simultaneous Equations * Word Problems * Graphing * Slopes * Interpolation And Extrapolation * Basic Concepts Of Geometry * Shapes And Figures Of Plane Geometry * Solid Geometric Figures * Pythagorean Theorem * Trigonometric Functions * Radians * Statistics * Imaginary And Complex Numbers * Matrices And Determinants * Calculus CHEMISTRY The Chemistry Handbook includes information on the atomic structure of matter; chemical bonding; chemical equations; chemical interactions involved with corrosion processes; water chemistry control, including the principles of water treatment; the hazards of chemicals and gases, and basic gaseous diffusion processes. * Characteristics Of Atoms * The Periodic Table * Chemical Bonding * Chemical Equations * Acids, Bases, Salts, And Ph * Converters * Corrosion Theory * General Corrosion * Crud And Galvanic Corrosion * Specialized Corrosion * Effects Of Radiation On Water Chemistry (Synthesis) * Chemistry Parameters * Purpose Of Water Treatment * Water Treatment Processes * Dissolved Gases, Suspended Solids, And Ph Control * Water Purity * Corrosives (Acids And Alkalies) * Toxic Compound * Compressed Gases * Flammable And Combustible Liquids ENGINEERING SYMBOLOGY. The Engineering Symbology, Prints, and Drawings Handbook includes information on engineering fluid drawings and prints; piping and instrument drawings; major symbols and conventions; electronic diagrams and schematics; logic circuits and diagrams; and fabrication, construction, and architectural drawings. * Introduction To Print Reading * Introduction To The Types Of Drawings, Views, And Perspectives * Engineering Fluids Diagrams And Prints * Reading Engineering P&IDs * P&ID Print Reading Example * Fluid Power P&IDs * Electrical Diagrams And Schematics * Electrical Wiring And Schematic Diagram Reading Examples * Electronic Diagrams And Schematics * Examples * Engineering Logic Diagrams * Truth Tables And Exercises * Engineering Fabrication, Construction, And Architectural Drawings * Engineering Fabrication, Construction, And Architectural Drawing, Examples MATERIAL SCIENCE. The Material Science Handbook includes information on the structure and properties of metals, stress mechanisms in metals, failure modes, and the characteristics of metals that are commonly used in DOE nuclear facilities. * Bonding * Common Lattice Types * Grain Structure And Boundary * Polymorphism * Alloys * Imperfections In Metals * Stress * Strain * Young's Modulus * Stress-Strain Relationship * Physical Properties * Working Of Metals * Corrosion * Hydrogen Embrittlement * Tritium/Material Compatibility * Thermal Stress * Pressurized Thermal Shock * Brittle Fracture Mechanism * Minimum Pressurization-Temperature Curves * Heatup And Cooldown Rate Limits * Properties Considered * When Selecting Materials * Fuel Materials * Cladding And Reflectors * Control Materials * Shielding Materials * Nuclear Reactor Core Problems * Plant Material Problems * Atomic Displacement Due To Irradiation * Thermal And Displacement Spikes * Due To Irradiation * Effect Due To Neutron Capture * Radiation Effects In Organic Compounds * Reactor Use Of Aluminum MECHANICAL SCIENCE. The Mechanical Science Handbook includes information on diesel engines, heat exchangers, pumps, valves, and miscellaneous mechanical components. * Diesel Engines * Fundamentals Of The Diesel Cycle * Diesel Engine Speed, Fuel Controls, And Protection * Types Of Heat Exchangers * Heat Exchanger Applications * Centrifugal Pumps * Centrifugal Pump Operation * Positive Displacement Pumps * Valve Functions And Basic Parts * Types Of Valves * Valve Actuators * Air Compressors * Hydraulics * Boilers * Cooling Towers * Demineralizers * Pressurizers * Steam Traps * Filters And Strainers NUCLEAR PHYSICS AND REACTOR THEORY. The Nuclear Physics and Reactor Theory Handbook includes information on atomic and nuclear physics; neutron characteristics; reactor theory and nuclear parameters; and the theory of reactor operation. * Atomic Nature Of Matter * Chart Of The Nuclides * Mass Defect And Binding Energy * Modes Of Radioactive Decay * Radioactivity * Neutron Interactions * Nuclear Fission * Energy Release From Fission * Interaction Of Radiation With Matter * Neutron Sources * Nuclear Cross Sections And Neutron Flux * Reaction Rates * Neutron Moderation * Prompt And Delayed Neutrons * Neutron Flux Spectrum * Neutron Life Cycle * Reactivity * Reactivity Coefficients * Neutron Poisons * Xenon * Samarium And Other Fission Product Poisons * Control Rods * Subcritical Multiplication * Reactor Kinetics * Reactor

Everything Is Negotiable: Achieving Your True Worth by Successfully Negotiating provides you with strategies and tactics that you can apply to maximize your negotiating abilities and to achieve new heights in your career. Author Robert T. Uda includes principles, secrets, and ideas not only for negotiating job offers, position titles, and raises, but also for getting paid what you are really worth. Everything is Negotiable will open your eyes to advancement possibilities and change the way you think about work. Everything is Negotiable is designed to work hand-in-hand with five of Uda's other books: Career Quest for Young Professionals: How to Maintain a Competitive Edge Over Your Peers Career Quest for College Graduates: Developing a Successful Career by Leveraging Each of Your Jobs Career Quest for College Students: Career Development for Those Who Plan to Have a Successful Career Resumes That Pack a Punch! Creating Beefy Bullets That Grab, Hook, and Wow Hiring Managers into Calling You for an Interview What Hue Is Your Bungee Cord? Job Searching Strategies for Those Over 40 Years of Age If you learn, internalize, and apply the principles within Everything Is Negotiable, you can seal a salary offer, promotion, consulting contract, or raise that pays you exactly what you are worth.

Competition for research funds in epidemiology, preventative medicine, and biostatistics has never been more intense and, at the same time, the grant application and review process at such agencies as the National Institutes of Health (NIH) is undergoing significant transformation. Writing Dissertation and Grant Proposals: Epidemiology, Preventive Medicine and Biostatistics targets effective grant proposal writing in this highly competitive and evolving environment. Covering all aspects of the proposal writing process, the text: Provides summary checklists and step-by-step guidelines for grant structure and style alongside broader strategies for developing a research funding portfolio Explains how to avoid common errors and pitfalls, supplying critical do's and don'ts that aid in writing solid grant proposals Demonstrates proven tactics and illustrates key concepts with extensive examples from successfully funded proposals Written by an established NIH reviewer with inside knowledge and an impressive track record of funding, Writing Dissertation and Grant Proposals: Epidemiology, Preventive Medicine and Biostatistics is a virtual cookbook of the appropriate ingredients needed to construct a winning grant

proposal. Therefore, the text is not only relevant for early-stage investigators including graduate students, medical students/residents, and postdoctoral fellows, but also valuable for experienced faculty, clinicians, epidemiologists, and health professionals who cannot seem to break the barrier to obtain NIH-funded research.

The definitive career guide for grad students, adjuncts, post-docs and anyone else eager to get tenure or turn their Ph.D. into their ideal job Each year tens of thousands of students will, after years of hard work and enormous amounts of money, earn their Ph.D. And each year only a small percentage of them will land a job that justifies and rewards their investment. For every comfortably tenured professor or well-paid former academic, there are countless underpaid and overworked adjuncts, and many more who simply give up in frustration. Those who do make it share an important asset that separates them from the pack: they have a plan. They understand exactly what they need to do to set themselves up for success. They know what really moves the needle in academic job searches, how to avoid the all-too-common mistakes that sink so many of their peers, and how to decide when to point their Ph.D. toward other, non-academic options. Karen Kelsky has made it her mission to help readers join the select few who get the most out of their Ph.D. As a former tenured professor and department head who oversaw numerous academic job searches, she knows from experience exactly what gets an academic applicant a job. And as the creator of the popular and widely respected advice site The Professor is In, she has helped countless Ph.D.'s turn themselves into stronger applicants and land their dream careers. Now, for the first time ever, Karen has poured all her best advice into a single handy guide that addresses the most important issues facing any Ph.D., including: -When, where, and what to publish -Writing a foolproof grant application -Cultivating references and crafting the perfect CV -Acing the job talk and campus interview -Avoiding the adjunct trap -Making the leap to nonacademic work, when the time is right The Professor Is In addresses all of these issues, and many more.

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Due to recent theoretical findings and advances in statistical computing, there has been a rapid development of techniques and applications in the area of missing data analysis. Statistical Methods for Handling Incomplete Data covers the most up-to-date statistical theories and computational methods for analyzing incomplete data. Features Uses the mean score equation as a building block for developing the theory for missing data analysis Provides comprehensive coverage of computational techniques for missing data analysis Presents a rigorous treatment of imputation techniques, including multiple imputation fractional imputation Explores the most recent advances of the propensity score method and estimation techniques for nonignorable missing data Describes a survey sampling application Updated with a new chapter on Data Integration Now includes a chapter on Advanced Topics, including kernel ridge regression imputation and neural network model imputation The book is primarily aimed at researchers and graduate students from statistics, and could be used as a reference by applied researchers with a good quantitative background. It includes many real data examples and simulated examples to help readers understand the methodologies.

Modern technology has infiltrated many facets of society, including educational environments. Through the use of virtual learning, educational systems can become more efficient at teaching the student population and break down cost and distance barriers to reach populations that traditionally could not afford a good education. Virtual Reality in Education: Breakthroughs in Research and Practice is an essential reference source on the uses of virtual reality in K-12 and higher education classrooms with a focus on pedagogical and instructional outcomes and strategies. Highlighting a range of pertinent topics such as immersive virtual learning environments, virtual laboratories, and distance education, this publication is an ideal reference source for pre-service and in-service teachers, school administrators, principles, higher education faculty, K-12 instructors, policymakers, and researchers interested in virtual reality incorporation in the classroom.

Praise for the Second Edition: "The authors present an intuitive and easy-to-read book. ... accompanied by many examples, proposed exercises, good references, and comprehensive appendices that initiate the reader unfamiliar with MATLAB." —Adolfo Alvarez Pinto, International Statistical Review "Practitioners of EDA who use MATLAB will want a copy of this book. ... The authors have done a great service by bringing together so many EDA routines, but their main accomplishment in this dynamic text is providing the understanding and tools to do EDA. —David A Huckaby, MAA Reviews Exploratory Data Analysis (EDA) is an important part of the data analysis process. The methods presented in this text are ones that should be in the toolkit of every data scientist. As computational sophistication has increased and data sets have grown in size and complexity, EDA has become an even more important process for visualizing and summarizing data before making assumptions to generate hypotheses and models. Exploratory Data Analysis with MATLAB, Third Edition presents EDA methods from a computational perspective and uses numerous examples and applications to show how the methods are used in practice. The authors use MATLAB code, pseudo-code, and algorithm descriptions to illustrate the concepts. The MATLAB code for examples, data sets, and the EDA Toolbox are available for download on the book's website. New to the Third Edition Random projections and estimating local intrinsic dimensionality Deep learning autoencoders and stochastic neighbor embedding Minimum spanning tree and additional cluster validity indices Kernel density estimation Plots for visualizing data distributions, such as beanplots and violin plots A chapter on visualizing categorical data

Dielectrics in Electric Fields explores the influence of electric fields on dielectric—i.e., non-conducting or insulating—materials, examining the distinctive behaviors of these materials through well-established principles of physics and engineering. Featuring five new chapters, nearly 200 new figures, and more than 800 new citations, this fully updated and significantly expanded Second Edition: Analyzes inorganic substances with real-life applications in harsh working conditions such as outdoor, nuclear, and space environments Introduces methods for measuring dielectric properties at microwave frequencies, presenting results obtained for specific materials Discusses the application of dielectric theory in allied fields such as corrosion studies, civil engineering, and health sciences Combines in one chapter coverage of electrical breakdown in gases with breakdown in micrometric gaps Offers extensive coverage of electron energy distribution—essential knowledge required for the application of plasma sciences in medical science Delivers a detailed review of breakdown in liquids, along with an overview of electron mobility, providing a clear understanding of breakdown phenomena Explains breakdown in solid dielectrics such as single crystals, polycrystalline and amorphous states, thin films, and powders compressed to form pellets Addresses the latest advances in dielectric theory and research, including cutting-edge nanodielectric materials and their practical applications Blends early classical papers that laid the foundation for much of the dielectric theory with more recent work The author has drawn from more than 55 years of research studies and experience in the areas of high-voltage engineering, power systems, and dielectric materials and systems to supply both aspiring and practicing engineers with a comprehensive, authoritative source for up-to-date information on dielectrics in electric fields.

Aimed at assisting doctoral candidates and early-career researchers and their supervisors globally, this book is the first of its type to address the challenges faced by students when proposing

new programs of research in the disciplines of gender, race, identity, indigeneity, and diversity within management and business. The problems researchers face derive from a lack of familiarity with the needed alignment of the methodology, conceptual framework, and the nature of epistemologies used in creating a coherent proposal. This results in project delays and unnecessary time in review as doctoral students and committees attempt to provide the required alignment. Essential reading for students and faculty engaged in these fields of study, the book provides a practical guide on how to navigate through these challenges and to arrive at a workable proposal that meets the requirements of the academy. To assist doctoral students in conducting their research, the book provides narratives that illustrate the complexities of researching gender, race, identity, indigeneity, and diversity in broad terms. It explains the importance of such research in creating positive social change and helping students identify the appropriate conceptual framework, align the problem statement with a purpose, construct the research question and the nature of the study, and identify the correct method to conduct the research. An essential guide for students and doctoral researchers, this book explains the dominant and marginalized epistemological orientations to acquaint doctoral researchers with the effects of their selections on the outcomes of their research. It provides guidance as to the appropriateness of quantitative or qualitative methods based on the selected epistemology and the problem statement.

Identifies and describes specific government assistance opportunities such as loans, grants, counseling, and procurement contracts available under many agencies and programs.

BLACK ENTERPRISE is the ultimate source for wealth creation for African American professionals, entrepreneurs and corporate executives. Every month, BLACK ENTERPRISE delivers timely, useful information on careers, small business and personal finance.

Advanced advice for students who want to read, write and learn about science in preparation for a career in that field.

Workplace training and education have increasingly been seen as pivotal factors in improving the abilities, skills and competitiveness of industry, and the aim of the Management Charter Initiative (MCI), was to improve managers' practical competency in line with this. Under the MCI, qualification was gained by proving managerial competence in work related tasks, rather than by studying for a theoretical, educational qualification such as an MBA or degree. This book provides a welcome and comprehensive analysis of the MCI within the context of modern management development. It emphasizes the benefits of linking management development with organizational strategy, and includes: * up-to-date analysis of how management development can be measured * the first comprehensive assessment of the impact of using Management Standards * practical illustrations with sixteen in-depth case studies of contemporary organizations. This revealing book is endorsed by the MCI and includes a foreword by Professor Tom Cannon, whose leadership spearheaded and developed the MCI itself.

As society continues to experience increases in technological innovations, various industries must rapidly adapt and learn to incorporate these advances. When utilized effectively, the use of computer systems in educational settings creates a richer learning environment for students. The Handbook of Research on 3-D Virtual Environments and Hypermedia for Ubiquitous Learning is a critical reference source for the latest research on the application of virtual reality in educational environments and how the immersion into three-dimensional settings enhances student motivation and interaction. Exploring innovative techniques and emerging trends in virtual learning and hypermedia, this book is ideally designed for researchers, developers, upper-level students, and educators interested in the incorporation of immersive technologies in the learning process.

Investigators, their home institutions, and funding agencies play significant roles in the development and outcomes of scientific projects. Submitting a proposal to a funding agency is only one dimension of a multivariable and complex funding process, and understanding this is a good first step toward unlocking the puzzle behind why some research proposals receive awards while others are declined. The Handbook of Scientific Proposal Writing offers researchers and research administrators a broad perspective on the process of initiating and conducting funded scientific research projects. Written for students and researchers in all fields and disciplines, this reference offers a holistic approach to conceiving and then converting new ideas into effective proposals. It focuses on the technical aspects of writing proposals rather than the fund-raising issues. Chapters provide full coverage of the scientific method, including information on how scientific research should be conducted. Providing the tools necessary to organize ideas and obtain the funds needed to effectively manage projects, the Handbook of Scientific Proposal Writing includes: 56 figures and 25 tables to help convey key ideas More than 150 citations that provide pointers to additional sources for further reading Examples to help the reader ease through more abstract concepts End-of-chapter questions to stimulate further examination and comprehension

Terman was widely hailed as the magnet that drew talent together into what became known as Silicon Valley."--BOOK JACKET.

Complex privacy-enhancing technologies are demystified through real-world use cases for facial recognition, cloud data storage, and more. Privacy-Preserving Machine Learning is a practical guide to keeping ML data anonymous and secure. You'll learn the core principles behind different privacy preservation technologies, and how to put theory into practice for your own machine learning. Complex privacy-enhancing technologies are demystified through real-world use cases for facial recognition, cloud data storage, and more. Alongside skills for technical implementation, you'll learn about current and future machine learning privacy challenges and how to adapt technologies to your specific needs. By the time you're done, you'll be able to create machine learning systems that preserve user privacy without sacrificing data quality and model performance. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

At a time when more and more of what people learn both in formal courses and in everyday life is mediated by technology, Learning Online provides a much-needed guide to different forms and applications of online learning. This book describes how online learning is being used in both K-12 and higher education settings as well as in learning outside

of school. Particular online learning technologies, such as MOOCs (massive open online courses), multi-player games, learning analytics, and adaptive online practice environments, are described in terms of design principles, implementation, and contexts of use. Learning Online synthesizes research findings on the effectiveness of different types of online learning, but a major message of the book is that student outcomes arise from the joint influence of implementation, context, and learner characteristics interacting with technology--not from technology alone. The book describes available research about how best to implement different forms of online learning for specific kinds of students, subject areas, and contexts. Building on available evidence regarding practices that make online and blended learning more effective in different contexts, Learning Online draws implications for institutional and state policies that would promote judicious uses of online learning and effective implementation models. This in-depth research work concludes with a call for an online learning implementation research agenda, combining education institutions and research partners in a collaborative effort to generate and share evidence on effective practices.

Includes undergraduate and graduate courses.

The electric power delivery system that carries electricity from large central generators to customers could be severely damaged by a small number of well-informed attackers. The system is inherently vulnerable because transmission lines may span hundreds of miles, and many key facilities are unguarded. This vulnerability is exacerbated by the fact that the power grid, most of which was originally designed to meet the needs of individual vertically integrated utilities, is being used to move power between regions to support the needs of competitive markets for power generation. Primarily because of ambiguities introduced as a result of recent restricting the of the industry and cost pressures from consumers and regulators, investment to strengthen and upgrade the grid has lagged, with the result that many parts of the bulk high-voltage system are heavily stressed. Electric systems are not designed to withstand or quickly recover from damage inflicted simultaneously on multiple components. Such an attack could be carried out by knowledgeable attackers with little risk of detection or interdiction. Further well-planned and coordinated attacks by terrorists could leave the electric power system in a large region of the country at least partially disabled for a very long time. Although there are many examples of terrorist and military attacks on power systems elsewhere in the world, at the time of this study international terrorists have shown limited interest in attacking the U.S. power grid. However, that should not be a basis for complacency. Because all parts of the economy, as well as human health and welfare, depend on electricity, the results could be devastating. Terrorism and the Electric Power Delivery System focuses on measures that could make the power delivery system less vulnerable to attacks, restore power faster after an attack, and make critical services less vulnerable while the delivery of conventional electric power has been disrupted.

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