

Junkbots Bugbots And Bots On Wheels Building Simple Robots With Beam Technology

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Kickin' Bot - Grant Imahara 2003-12-05

Enter the arena of the metal gladiators Do you have what it takes to build a battle-ready robot? You do now. Here are the plans, step-by-step directions, and expert advice that will put you in competition-while you have a heck of a lot of fun getting there. Grant Imahara, the creator of the popular BattleBot Deadblow, shares everything he's learned about robot design, tools and techniques for metal working, the parts you need and where to get them, and plenty of tips to keep you off the ropes. When you're finished, you'll be ready to rumble. Just a few of the topics you'll learn: Robot design 101 Chemicals and power tools Popular materials compared Cutting your armor Things to know about screws Top ten drive motors Bearings, casters, couplers, and U-joints Roller chains and sprockets Better traction through chemistry Choosing speeding controls Batteries and wiring The driving test Rammers, hammers and crushers

The Robosapien Companion - James Samans 2007-04-29

* Dr. Mark Tilden, the inventor of Robosapien, has provided the author with exclusive access to the Robosapien v2 program. * Provides access to the 20-plus "Easter eggs" (the hidden secrets) programmed into Robosapien. * Over 2 million Robosapiens have sold since 2004.

Robot Builder's Bonanza, 4th Edition - Gordon McComb 2011-05-23

The Bestselling Robotics Book--Now with New Projects and Online Tools! "Amazing...should be required reading for any budding robot builder!" -GeekDad, Wired.com Have fun while learning how to design, construct, and use small robots! This richly illustrated guide offers everything you need to know to construct sophisticated, fully autonomous robots that can be programmed from your computer. Fully updated with the latest technologies and techniques, *Robot Builder's Bonanza, Fourth Edition* includes step-by-step plans that take you from building basic motorized platforms to giving the machine a brain--and teaching it to walk, talk, and obey commands. This robot builder's paradise is packed with more than 100 affordable projects, including 10 completely new robot designs. The projects are modular and can be combined to create a variety of highly intelligent and workable robots of all shapes and sizes. Mix and match the projects to develop your own unique creations. The only limit is your imagination! *Robot Builder's Bonanza, Fourth Edition* covers: Parts, materials, and tools Building motorized wooden, plastic, and metal platforms Rapid prototyping methods Drafting bots with computer-aided design Constructing high-tech robots from toys Building bots from found parts Power, motors, and locomotion Robots with wheels, tracks, and legs Constructing robotic arms and grippers Robot electronics and circuit making Computers and electronic control Microcontrollers--Arduino, PICAXE, and the BASIC stamp Remote control systems Sensors, navigation, and visual feedback Robot vision via proximity, light, and distance

New! FREE online content at: www.robotoid.com My First Robot tutorial lessons Project parts finder Animated, interactive learning tools How-to videos, robot e-plans, bonus articles, links, and more Plus, go to: www.mhprofessional.com/rbb4 for: Downloadable programs RBB app notes Bonus chapters Make Great Stuff! TAB, an imprint of McGraw-Hill Professional, is a leading publisher of DIY technology books for makers, hackers, and electronics hobbyists.

Unscrewed - Ed Sobey 2011-06

Perfect for the do-it-yourselfer, this handy guide to household electronics gives the weekend workbench enthusiast a multitude of ideas on how to salvage valuable parts from old electronics and turn them into useful gadgets once more. This handbook is loaded with information and helpful tips for disassembling old and broken electronics. Each of the more than 50 deconstruction projects includes a "treasures cache" of the components to be found, a required tools list, and step-by-step instructions with photos on how to safely extract the working components. Projects include building a desk lamp from an old flatbed scanner, a barbeque supercharger from a Dustbuster impeller, and a robot from the gears, rollers, and stepper motor found in an ink-jet printer. Now, old VHS players and fax machines will find new life with these fun ideas.

Solar Energy Projects for the Evil Genius - Gavin Harper 2007-06-22

FOLLOW THE SUN TO MORE EVIL FUN! Let the sun shine on your evil side - and have a wicked amount of fun on your way to becoming a solar energy master! In this guide, the popular Evil Genius format ramps up your understanding of powerful, important, and environmentally friendly solar energy - and shows you how to build real, practical solar energy projects you can use in your home, yard - even on the road! In *Solar Energy Projects for the Evil Genius*, high-tech guru Gavin Harper gives you everything you need to build more than 50 thrilling solar energy projects. You'll find complete, easy-to-follow plans, with clear diagrams and schematics, so you know exactly what's involved before you begin. Illustrated instructions and plans for 30 amazing pretested solar energy projects that assume no prior experience with energy science Explanations of the science and math behind each project Projects that progress in difficulty - from simple ones that may inspire science fair entries - all the way to converting a real home to solar energy Frustration-factor removal-needed parts are listed, along with sources-plus all the tools you'll need *Solar Energy Projects for the Evil Genius* provides you with complete plans, instructions, parts lists, and sources for: Crushed berries solar cell Solar "death ray" Solar powered hot dog cooker Solar furnace Sun-powered refrigerator Camping shower, oven, and more Hot recipes for solar cooking Water purifier Flashlight Garden lights Solar vehicle Environmentally friendly robot Much more!

LEGO MINDSTORMS NXT-G Programming Guide - James Floyd

Kelly 2010-08-03

James Kelly's LEGO MINDSTORMS NXT-G Programming Guide, Second Edition is a fountain of wisdom and ideas for those looking to master the art of programming LEGO's MINDSTORMS NXT robotics kits. This second edition is fully-updated to cover all the latest features and parts in the NXT 2.0 series. It also includes exercises at the end of each chapter and other content suggestions from educators and other readers of the first edition. LEGO MINDSTORMS NXT-G Programming Guide, Second Edition focuses on the NXT-G programming language. Readers 10 years old and up learn to apply NXT-G to real-life problems such as moving and turning, locating objects based upon their color, making decisions, and much more. Perfect for those who are new to programming, the book covers the language, the underlying mathematics, and explains how to calibrate and adjust robots for best execution of their programming. Provides programming techniques and easy-to-follow examples for each and every programming block Includes homework-style exercises for use by educators Gives clear instructions on how to build a test robot for use in running the example programs Please note: the print version of this title is black & white; the eBook is full color.

The Management of Insects in Recreation and Tourism -

Raynald Harvey Lemelin 2012-11-22

Insects such as cockroaches, mosquitoes and bed-bugs are usually not highly sought amongst travellers or recreationists, yet each year, collectors, butterfly enthusiasts, dragonfly-hunters and apiarists collect, visit, document and raise insects for recreational purposes. Illustrating a range of human-insect encounters from an interdisciplinary perspective, this book provides the first insight into the booming industry of insect recreation. Case studies and examples demonstrate the appeal of insects, ranging from the captivating beauty of butterflies to the curious fascination of locust swarms, and challenge the notion that animals lacking anthropomorphic features hold little or no interest for humans. Throughout the book, the emphasis is on the innovators, the educators, the dedicated researchers and activists who, through collaboration across fields ranging from entomology to sociology and anthropology, have brought insects from the recreational fringes to the forefront of many conservation and leisure initiatives.

Robotics, Mechatronics, and Artificial Intelligence -

Newton C. Braga 2002

Accessible to all readers, including students of secondary school and amateur technology enthusiasts, Robotics, Mechatronics, and Artificial Intelligence simplifies the process of finding basic circuits to perform simple tasks, such as how to control a DC or step motor, and provides instruction on creating moving robotic parts, such as an "eye" or an "ear." Though many companies offer kits for project construction, most experimenters want to design and build their own robots and other creatures specific to their needs and goals. With this new book by Newton Braga, hobbyists and experimenters around the world will be able to decide what skills they want to feature in a project and then choose the right "building blocks" to create the ideal results. In the past few years the technology of robotics, mechatronics, and artificial intelligence has exploded, leaving many people with the desire but not the means to build their own projects. The author's fascination with and expertise in the exciting field of robotics is demonstrated by the range of simple to complex project blocks he provides, which are designed to benefit both novice and experienced robotics enthusiasts. The common components and technology featured in the project blocks are especially beneficial to readers who need practical solutions that can be implemented easily by their own hands, without incorporating expensive, complicated technology.

Accessible to technicians and hobbyists with many levels of experience, and written to provide inexpensive and creative fun with robotics Appeals to all sorts of technology enthusiasts, including those involved with electronics, computers, home automation, mechanics, and other areas

Library Journal - 2003

Includes, beginning Sept. 15, 1954 (and on the 15th of each month, Sept.-May) a special section: School library journal, ISSN 0000-0035, (called Junior libraries, 1954-May 1961). Also issued separately.

Constructing Robot Bases - Gordon McComb 2003-11

This title gives an in-depth look at constructing robot bases - the ultimate guide for intermediate builders.

Build Your Own Robot! - Karl Lunt 2000-03-15

This book, a compilation of articles from Karl Lunt's long-running column for Nuts & Volts magazine, is a must-read for all beginner and intermediate-level robotics enthusiasts. Written in a friendly, straightforward manner, it contains entertaining anecdotes as well as practical advice and instruction. The author's stories about his various robotics projects will inspire you to try them yourself; and he shares his tips and code to help you. Possible projects range from transforming a TV remote control into a robot controller to building a robot from a drink cooler. You'll want to build them all; the author's enthusiasm for robotics is contagious!

Basic Robotics - Keith Dinwiddie 2015-01-01

With no previous experience required, BASIC ROBOTICS walks readers step by step through the fundamentals of the industrial robot system. It begins with an exploration of the fascinating technological history that led to the modern robot, starting with events from Before the Common Era and ending with a glimpse of what the robots of tomorrow might become. From there the book explores safety, various parts of the robot, tooling, power transmission systems, the basics of programming, troubleshooting, maintenance, and much more. Engaging photos highlight various robotic systems and their parts, while stories of real-world events bring text concepts to life. This innovative First Edition incorporates many of the initiatives of STEM and is the culmination of lessons learned from the author's years of teaching robotics in various formats--from the traditional classroom to the industrial production floor with systems ranging from the LEGO Mindstorms NXT to the FANUC robot. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Biologically Inspired Intelligent Robots - Yoseph Bar-Cohen 2003

The multidisciplinary issues involved in the development of biologically inspired intelligent robots include materials, actuators, sensors, structures, functionality, control, intelligence, and autonomy. This book reviews various aspects ranging from the biological model to the vision for the future.

The Robot Builder's Bonanza - Gordon McComb 2001

Provides instructions for building 99 inexpensive robots.

The British National Bibliography - Arthur James Wells 2004

JunkBots, Bugbots, and Bots on Wheels: Building Simple Robots With BEAM Technology - David Hrynkiw 2002-10-18

From the publishers of BattleBots: The Official Guide comes this do-it-yourself guide to BEAM (Biology, Electronics, Aesthetics, Mechanics) robots. They're cheap, simple, and can be built by beginners in just a few hours, with help from this expert guide complete with full-color photos. Get ready for some dumpster-diving!

Making Simple Robots - Kathy Ceceri 2015-02-19

Making Simple Robots is based on one idea: Anybody can

build a robot! That includes kids, school teachers, parents, and non-engineers. If you can knit, sew, or fold a flat piece of paper into a box, you can build a no-tech robotic part. If you can use a hot glue gun, you can learn to solder basic electronics into a low-tech robot that reacts to its environment. And if you can figure out how to use the apps on your smart phone, you can learn enough programming to communicate with a simple robot. Written in language that non-engineers can understand, *Making Simple Robots* helps beginners move beyond basic craft skills and materials to the latest products and tools being used by artists and inventors. Find out how to animate folded paper origami, design a versatile robot wheel-leg for 3D printing, or program a rag doll to blink its cyborg eye. Each project includes step-by-step directions as well as clear diagrams and photographs. And every chapter offers suggestions for modifying and expanding the projects, so that you can return to the projects again and again as your skill set grows.

The Indian Child Welfare Act Handbook - Billy Joe Jones 2008

Previous edition, 1st, published in 1995.

JunkBots, Bugbots, and Bots on Wheels: Building Simple Robots With BEAM Technology - David Hrynkiw 2002-10-18

From the publishers of *BattleBots: The Official Guide* comes this do-it-yourself guide to BEAM (Biology, Electronics, Aesthetics, Mechanics) robots. They're cheap, simple, and can be built by beginners in just a few hours, with help from this expert guide complete with full-color photos. Get ready for some dumpster-diving!

Solar Energy Projects for the Evil Genius - Gavin Harper 2007-03-08

FOLLOW THE SUN TO MORE EVIL FUN! Let the sun shine on your evil side - and have a wicked amount of fun on your way to becoming a solar energy master! In this guide, the popular *Evil Genius* format ramps up your understanding of powerful, important, and environmentally friendly solar energy - and shows you how to build real, practical solar energy projects you can use in your home, yard - even on the road! In *Solar Energy Projects for the Evil Genius*, high-tech guru Gavin Harper gives you everything you need to build more than 50 thrilling solar energy projects. You'll find complete, easy-to-follow plans, with clear diagrams and schematics, so you know exactly what's involved before you begin. Illustrated instructions and plans for 30 amazing pretested solar energy projects that assume no prior experience with energy science Explanations of the science and math behind each project Projects that progress in difficulty - from simple ones that may inspire science fair entries - all the way to converting a real home to solar energy Frustration-factor removal-needed parts are listed, along with sources-plus all the tools you'll need *Solar Energy Projects for the Evil Genius* provides you with complete plans, instructions, parts lists, and sources for: Crushed berries solar cell Solar "death ray" Solar powered hot dog cooker Solar furnace Sun-powered refrigerator Camping shower, oven, and more Hot recipes for solar cooking Water purifier Flashlight Garden lights Solar vehicle Environmentally friendly robot Much more!

The Best of Make: - Mark Frauenfelder 2007-10-24

After two years, *MAKE* has become one of most celebrated new magazines to hit the newsstands, and certainly one of the hottest reads. If you're just catching on to the *MAKE* phenomenon and wonder what you've missed, this book contains the best DIY projects from the magazine's first ten volumes -- a surefire collection of fun and challenging activities going back to *MAKE*'s launch in early 2005. Find out why *MAKE* has attracted a passionate following of tech and DIY enthusiasts worldwide with one million web site visitors and a quarter of a million magazine readers. And why our podcasts consistently rank

in the top-25 for computers and technology. With the Best of *MAKE*, you'll share the curiosity, zeal, and energy of Makers -- the citizen scientists, circuit benders, homemakers, students, automotive enthusiasts, roboticists, software developers, musicians, hackers, hobbyists, and crafters -- through this unique and inspiring assortment of DIY projects chosen by the magazine's editors. Learn to: Hack your gadgets and toys Program microcontrollers to sense and react to things Take flight with rockets, planes, and other projectiles Make music from the most surprising of things Find new ways to take photos and make video Outfit yourself with the coolest tools Put together by popular demand, the Best of *MAKE* is the perfect gift for any maker, including current subscribers who missed early volumes of the magazine. Do you or someone you know have a passion for the magic of tinkering, hacking, and creation? Do you enjoy finding imaginative and unexpected uses for the technology and materials in your life? Then get on board with the Best of *MAKE*!

Encyclopedia of Careers and Vocational Guidance: Career articles, PHY-Z - 2011

Provides detailed facts and current statistics for over 750 occupations in more than 90 key career fields. Contains more than 500 photographs.

The Ultimate Palm Robot - Kevin Mukhar 2003

Explains how to use a Palm OS handheld device to build a functioning robot, covering hardware, software, programming, games, and resources.

Mobile Robotics - Ulrich Nehmzow 2003-07-08

Mobile Robotics: A Practical Introduction (2nd edition) is an excellent introduction to the foundations and methods used for designing completely autonomous mobile robots. A fascinating, cutting-edge, research topic, autonomous mobile robotics is now taught in more and more universities. In this book you are introduced to the fundamental concepts of this complex field via twelve detailed case studies that show how to build and program real working robots. Topics covered include learning, autonomous navigation in unmodified, noisy and unpredictable environments, and high fidelity robot simulation. This new edition has been updated to include a new chapter on novelty detection, and provides a very practical introduction to mobile robotics for a general scientific audience. It is essential reading for 2nd and 3rd year undergraduate students and postgraduate students studying robotics, artificial intelligence, cognitive science and robot engineering. The update and overview of core concepts in mobile robotics will assist and encourage practitioners of the field and set challenges to explore new avenues of research in this exciting field. The author is Senior Lecturer at the Department of Computer Science at the University of Essex. "A very fine overview over the relevant problems to be solved in the attempt to bring intelligence to a moving vehicle." Professor Dr. Ewald von Puttkamer, University of Kaiserslautern "Case studies show ways of achieving an impressive repertoire of kinds of learned behaviour, navigation and map-building. The book is an admirable introduction to this modern approach to mobile robotics and certainly gives a great deal of food for thought. This is an important and though-provoking book." Alex M. Andrew in *Kybernetes* Vol 29 No 4 and *Robotica* Vol 18

Intermediate Robot Building - David Cook 2010-08-13

For readers of *Robot Building for Beginner* (Apress, 2002 and 2009), welcome to the next level. *Intermediate Robot Building, Second Edition* offers you the kind of real-world knowledge that only renowned author David Cook can offer. In this book, you'll learn the value of a robot heartbeat and the purpose of the wavy lines in photocells. You'll find out what electronic part you should sand. You'll discover how a well-placed switch can help a robot avoid obstacles better than a pair of feelers. And you'll avoid mistakes that can cause a

capacitor to explode. Want a robot that can explore rooms, follow lines, or battle opponents in mini-sumo? This book presents step-by-step instructions and circuit and part descriptions so that you can build the robot featured in the book or apply the modules to your own robot designs. Finally, you'll find the complete schematics for Roundabout, a room explorer that requires no programming and uses only off-the-shelf electronics. With Roundabout, you'll use many of the same techniques used by professional robotics engineers, and you'll experience many of the same challenges and joys they feel when a robot "comes to life."

Mindhacker - Ron Hale-Evans 2011-08-10

Compelling tips and tricks to improve your mental skills Don't you wish you were just a little smarter? Ron and Marty Hale-Evans can help with a vast array of witty, practical techniques that tune your brain to peak performance. Founded in current research, Mindhacker features 60 tips, tricks, and games to develop your mental potential. This accessible compilation helps improve memory, accelerate learning, manage time, spark creativity, hone math and logic skills, communicate better, think more clearly, and keep your mind strong and flexible.

Make: Lego and Arduino Projects - John Baichtal 2012-11-30

Provides step-by-step instructions for building a variety of LEGO Mindstorms NXT and Arduino devices.

Nuts & Volts - 2004

Biomimetics - Yoseph Bar-Cohen 2005-11-02

Nature is the world's foremost designer. With billions of years of experience and boasting the most extensive laboratory available, it conducts research in every branch of engineering and science. Nature's designs and capabilities have always inspired technology, from the use of tongs and tweezers to genetic algorithms and autonomous legged robots. Taking a systems perspective rather than focusing narrowly on materials or chemistry aspects, Biomimetics: Biologically Inspired Technologies examines the field from every angle. The book contains pioneering approaches to biomimetics including a new perspective on the mechanization of cognition and intelligence, as well as defense and attack strategies in nature, their applications, and potential. It surveys the field from modeling to applications and from nano- to macro-scales, beginning with an introduction to principles of using biology to inspire designs as well as biological mechanisms as models for technology. This innovative guide discusses evolutionary robotics; genetic algorithms; molecular machines; multifunctional, biological-, and nano- materials; nastic structures inspired by plants; and functional surfaces in biology. Looking inward at biological systems, the book covers the topics of biomimetic materials, structures, control, cognition, artificial muscles, biosensors that mimic senses, artificial organs, and interfaces between engineered and biological systems. The final chapter contemplates the future of the field and outlines the challenges ahead. Featuring extensive illustrations, including a 32-page full-color insert, Biomimetics: Biologically Inspired Technologies provides unmatched breadth of scope as well as lucid illumination of this promising field.

Robots - Rebecca Stefoff 2008-01-30

Provides a brief history of robotics, describes tasks for which robots are useful, and suggests future development.

Absolute Beginner's Guide to Building Robots - Gareth Branwyn 2003-09-19

This is the eBook version of the printed book. If the print book includes a CD-ROM, this content is not included within the eBook version. A real-world business book for the explosion of eBay entrepreneurs! *Absolute Beginner's Guide to Launching an eBay Business* guides

you step-by-step through the process of setting up an eBay business, and offers real-world advice on how to run that business on a day-to-day basis and maximize financial success. This book covers determining what kind of business to run, writing an action-oriented business plan, establishing an effective accounting system, setting up a home office, obtaining starting inventory, arranging initial funding, establishing an eBay presence, and arranging for automated post-auction management.

Sneakiest Uses for Everyday Things - Cy Tymony 2009-01-01

The third volume in the Sneaky Uses series features fifty all-new amazing projects made from ordinary household items. Master of homemade inventions Cy Tymony is back with the absolute Sneakiest Uses for Everyday Things! Would-be inventors, junk drawer aficionados, and science-fair parents rejoice as Cy helps you bring out your inner MacGyver. In these pages you will learn how to turn a piece of paper into a Frisbee, a business card into a boomerang, a TV tray into a robot, and more. Beginning with a complete list of materials and some sneaky science fundamentals, Cy presents easy-to-follow step-by-step instructions paired with helpful illustrations. Most projects will be completed in just minutes using common items found around the house.

Nuts & Volts Magazine - 2003

Beginning Arduino - Michael McRoberts 2011-07-29

In *Beginning Arduino*, you will learn all about the popular Arduino microcontroller by working your way through an amazing set of 50 cool projects. You'll progress from a complete beginner regarding Arduino programming and electronics knowledge to intermediate skills and the confidence to create your own amazing Arduino projects. Absolutely no experience in programming or electronics required! Rather than requiring you to wade through pages of theory before you start making things, this book has a hands-on approach. You will dive into making projects right from the start, learning how to use various electronic components and how to program the Arduino to control or communicate with those components. Each project is designed to build upon the knowledge learned in earlier projects and to further your knowledge in programming as well as skills with electronics. By the end of the book you will be able to create your own projects confidently and with creativity. Please note: the print version of this title is black & white; the eBook is full color. You can download the color diagrams in the book from <http://www.apress.com/9781430232407>

Snip, Burn, Solder, Shred - David Erik Nelson 2010-11-15 *Snip, Burn, Solder, Shred* is packed with fun craft and toy-making projects for geeks on a budget. Inside, you'll find illustrated instructions for 24 quirky playthings. Part I: Kid Stuff contains child-friendly projects like the Lock-N-Latch Treasure Chest and a PVC TeePee; Part II: The Electro-Skiffle Band is devoted to homemade musical instruments; and Part III: The Locomotivated showcases moving toys, like a muzzleloader that shoots marshmallows and a steam-powered milk-carton boat. Each project costs just \$10 or less to make and is suitable for anyone, regardless of experience level. As you build, you'll learn useful sewing and carpentry skills, and the appendix offers a primer on electronics and soldering. You (and your kids) will have hours of fun making projects like: -A simple electric guitar - An oversized joy buzzer that (safely) administers a 100-volt jolt - Cool, mess-free, screen-printed T-shirts - Kites made from FedEx envelopes - Booming Thunderdrums made from salvaged x-ray film - Classic board games like Go, Tafl, and Shut-the-Box Whether you're a mom or dad in search of a rainy day activity, a Scout leader looking to educate and entertain your troop, or just a DIY weekend warrior, the projects in *Snip, Burn, Solder,*

Shred will inspire and amuse you. Now, roll up your sleeves and make!

Insectronics - Karl Williams 2003

This complete project book delivers all the step-by-step plans users need to construct their own six-legged, insect-like robot that walks and actually responds to its environment. Using inexpensive off-the-shelf parts hobbyists can "build a better bug" and at the same time have fun honing their knowledge of mechanical construction.

Introduction to AI Robotics, second edition - Robin R. Murphy 2019-10-01

A comprehensive survey of artificial intelligence algorithms and programming organization for robot systems, combining theoretical rigor and practical applications. This textbook offers a comprehensive survey of artificial intelligence (AI) algorithms and programming organization for robot systems. Readers who master the topics covered will be able to design and evaluate an artificially intelligent robot for applications involving sensing, acting, planning, and learning. A background in AI is not required; the book introduces key AI topics from all AI subdisciplines throughout the book and explains how they contribute to autonomous capabilities. This second edition is a major expansion and reorganization of the first edition, reflecting the dramatic advances made in AI over the past fifteen years. An introductory overview provides a framework for thinking about AI for robotics, distinguishing between the fundamentally different design paradigms of automation and autonomy. The book then discusses the reactive functionality of sensing and acting in AI robotics; introduces the deliberative functions most often associated with intelligence and the capability of autonomous initiative; surveys multi-robot systems and (in a new chapter) human-robot interaction; and offers a "metaview" of how to design and evaluate autonomous systems and the ethical considerations in doing so. New material covers locomotion, simultaneous localization and mapping, human-robot interaction, machine learning, and ethics. Each chapter includes exercises, and many chapters provide case studies. Endnotes point to additional

reading, highlight advanced topics, and offer robot trivia.

Artificial Cognitive Systems - David Vernon 2014-10-17

A concise introduction to a complex field, bringing together recent work in cognitive science and cognitive robotics to offer a solid grounding on key issues. This book offers a concise and accessible introduction to the emerging field of artificial cognitive systems. Cognition, both natural and artificial, is about anticipating the need for action and developing the capacity to predict the outcome of those actions. Drawing on artificial intelligence, developmental psychology, and cognitive neuroscience, the field of artificial cognitive systems has as its ultimate goal the creation of computer-based systems that can interact with humans and serve society in a variety of ways. This primer brings together recent work in cognitive science and cognitive robotics to offer readers a solid grounding on key issues. The book first develops a working definition of cognitive systems—broad enough to encompass multiple views of the subject and deep enough to help in the formulation of theories and models. It surveys the cognitivist, emergent, and hybrid paradigms of cognitive science and discusses cognitive architectures derived from them. It then turns to the key issues, with chapters devoted to autonomy, embodiment, learning and development, memory and prospection, knowledge and representation, and social cognition. Ideas are introduced in an intuitive, natural order, with an emphasis on the relationships among ideas and building to an overview of the field. The main text is straightforward and succinct; sidenotes drill deeper on specific topics and provide contextual links to further reading.

The Best of Instructables - The editors at Make magazine and Instructables.com 2008

Offers step-by-step instructions for over one hundred and twenty projects from the do-it-yourself website, exploring such things as home and garden, transportation, food, and electronics..

Getting Started with Arduino - Massimo Banzi 2011-09-13
Presents an introduction to the open-source electronics prototyping platform.