

ROBOT BUILDING FOR BEGINNERS TECHNOLOGY IN ACTION

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Squeak - Stephane Ducasse 2006-11-22

* Fun and easy-to-grasp, yet based on solid programming principles of object-oriented programming * Visually oriented—teaches programming by commanding turtle to move through loops, variables, procedures, and AI * Suitable for any reader, from curious children to adults, who'd like a gentle, methodical approach to core programming concepts

Creating Cool MINDSTORMS NXT Robots -

Daniele Benedettelli 2009-03-24

This book teaches anyone interested how to build LEGO MINDSTORMS robots. The author starts with an easy robot and gets to more detail in the succeeding six robots built in the book.

The robots he presents are award winning robots, so he is giving away his secrets. The author also teaches how to program the robots. If you are not a programmer, then you can use the code provided. He tells you what equipment you need and how to get it inexpensively. So everything is discussed that you will need to create these robots or modify his designs to create your own. You truly experience the technology in action as you create your robots.

LEGO MINDSTORMS NXT 2.0 - James Floyd Kelly 2010-01-13

Follow the adventures of Evan and his archaeologist uncle as they explore for treasure from an ancient kingdom. Help them succeed by

building a series of five robots using LEGO's popular MINDSTORMS NXT 2.0 robotics kit. Without your robots, Evan and his uncle are doomed to failure and in grave danger. Your robots are the key to their success in unlocking the secret of The King's Treasure! In this sequel to the immensely popular book, LEGO MINDSTORMS NXT: The Mayan Adventure, you get both an engaging story and a personal tutorial on robotics programming. You'll learn about the motors and sensors in your NXT 2.0 kit. You'll learn to constructively brainstorm solutions to problems. And you'll follow clear, photo-illustrated instructions that help you build, test, and operate a series of five robots corresponding to the five challenges Evan and his uncle must overcome in their search for lost treasure. Provides an excellent series of parent/child projects Builds creative and problem-solving skills Lays a foundation for success and fun with LEGO MINDSTORMS NXT 2.0 Please note: the print version of this title is black & white; the eBook is full color.

CNC Robotics - Geoff Williams 2003

Provides step-by-step instructions for designing, constructing, and testing a fully functional CNC robot.

Modern Robotics - Kevin M. Lynch 2017-05-25

A modern and unified treatment of the mechanics, planning, and control of robots,

suitable for a first course in robotics.

Arduino Robotics - John-David Warren

2011-10-08

This book will show you how to use your Arduino to control a variety of different robots, while providing step-by-step instructions on the entire robot building process. You'll learn Arduino basics as well as the characteristics of different types of motors used in robotics. You also discover controller methods and failsafe methods, and learn how to apply them to your project. The book starts with basic robots and moves into more complex projects, including a GPS-enabled robot, a robotic lawn mower, a fighting bot, and even a DIY Segway-clone. Introduction to the Arduino and other components needed for robotics Learn how to build motor controllers Build bots from simple line-following and bump-sensor bots to more complex robots that can mow your lawn, do battle, or even take you for a ride Please note: the print version of this title is black & white; the eBook is full color.

The 12 Biggest Breakthroughs in Robot Technology - Marne Ventura 2015

This book features 12 of the most influential technology breakthroughs in robotics covering the major players in each breakthrough, its main turning points, and how it changed the way we live.

Robot Programming - Cameron Hughes

2016-05-02

Start programming robots NOW! Learn hands-on, through easy examples, visuals, and code This is a unique introduction to programming robots to execute tasks autonomously. Drawing on years of experience in artificial intelligence and robot programming, Cameron and Tracey Hughes introduce the reader to basic concepts of programming robots to execute tasks without the use of remote controls. Robot Programming: A Guide to Controlling Autonomous Robots takes the reader on an adventure through the eyes of Midamba, a lad who has been stranded on a desert island and must find a way to program robots to help him escape. In this guide, you are presented with practical approaches and techniques to program robot sensors, motors, and translate your ideas into tasks a robot can execute autonomously. These techniques can be used on today's leading robot microcontrollers

(ARM9 and ARM7) and robot platforms (including the wildly popular low-cost Arduino platforms, LEGO® Mindstorms EV3, NXT, and Wowee RS Media Robot) for your hardware/Maker/DIY projects. Along the way the reader will learn how to: Program robot sensors and motors Program a robot arm to perform a task Describe the robot's tasks and environments in a way that a robot can process using robot S.T.O.R.I.E.S. Develop a R.S.V.P. (Robot Scenario Visual Planning) used for designing the robot's tasks in an environment Program a robot to deal with the "unexpected" using robot S.P.A.C.E.S. Program robots safely using S.A.R.A.A. (Safe Autonomous Robot Application Architecture) Approach Program robots using Arduino C/C++ and Java languages Use robot programming techniques with LEGO® Mindstorms EV3, Arduino, and other ARM7 and ARM9-based robots.

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.

Robot Building for Beginners - Cathan Cook 2008-01-01

"Robot Building for Beginners" provides basic, practical knowledge on getting started in amateur robotics. Short chapters are perfectly suited for bedtime reading. It contains step-by-step instructions and small, hands-on experiments, including a line-following robot that the reader builds out of a sandwich container. By the end, the reader will make a palm-size solar robot and is also introduced to contests and potential project plans. Author

David Cook begins with the anatomy of a homemade robot and advice on how to proceed successfully. General sources for tools and parts are provided in a consolidated listing and with specific part references throughout each chapter. Basic safety and numbering systems are also covered.

Beginning Robotics with Raspberry Pi and Arduino - Jeff Cicolani 2018-04-23

Learn how to use a Raspberry Pi in conjunction with an Arduino to build a basic robot with advanced capabilities. Getting started in robotics does not have to be difficult. This book is an insightful and rewarding introduction to robotics and a catalyst for further directed study. You'll be led step by step through the process of building a robot that uses the power of a Linux based computer paired with the simplicity of Arduino. You'll learn why the Raspberry Pi is a great choice for a robotics platform; its strengths as well as its shortcomings; how to overcome these limitations by implementing an Arduino; and the basics of the Python programming language as well as some of the more powerful features. With the Raspberry Pi you can give your project the power of a Linux computer, while Arduino makes interacting with sensors and motors very easy. These two boards are complimentary in their functions; where one falters the other performs admirably. The book also includes references to other great works to help further your growth in the exciting, and now accessible, field of smart robotics. As a bonus, the final chapter of the book demonstrates the real power of the Raspberry Pi by implementing a basic vision system. Using OpenCV and a standard USB web cam, you will build a robot that can chase a ball. What You'll Learn Install Raspbian, the operating system that drives the Raspberry Pi Drive motors through an I2C motor controller Read data through sensors attached to an Arduino Who This Book Is For Hobbyists and students looking for a rapid start in robotics. It assumes no technical background. Readers are guided to pursue the areas that interest them in more detail as they learn.

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!

The Last Human - Lee Bacon 2019-10-08

Humans went extinct thirty years ago. Now the world is ruled by machines. And twelve-year-old robot XR_935 is just fine with that. Without humans around, there is no war, no pollution, no crime. Every member of society has a purpose. Everything runs smoothly and efficiently. Until the day XR discovers something impossible: a human girl named Emma. Now, Emma, XR, and two other robots must embark on a dangerous voyage in search of a mysterious point on a map. But how will they survive in a place where rules are never broken and humans aren't even supposed to exist? And what will they find at the end of their journey? Narrated in the first person (first robot?) by XR, *The Last Human* blends humor and action with moments of poignancy to tell a story about friendship, technology, and challenging the status quo no matter the consequences. It's not just about what it means to be a robot. It's about what it means to be a human.

The Robotics Primer - Maja J. Mataric 2007-08-17

A broadly accessible introduction to robotics that spans the most basic concepts and the most novel applications; for students, teachers, and hobbyists. *The Robotics Primer* offers a broadly accessible introduction to robotics for students at pre-university and university levels, robot hobbyists, and anyone interested in this burgeoning field. The text takes the reader from the most basic concepts (including perception and movement) to the most novel and sophisticated applications and topics (humanoids, shape-shifting robots, space robotics), with an emphasis on what it takes to create autonomous intelligent robot behavior. The core concepts of robotics are carried through from fundamental definitions to more complex explanations, all presented in an engaging, conversational style that will appeal to readers of different backgrounds. *The Robotics Primer* covers such topics as the definition of robotics, the history of robotics ("Where do

Robots Come From?”), robot components, locomotion, manipulation, sensors, control, control architectures, representation, behavior (“Making Your Robot Behave”), navigation, group robotics, learning, and the future of robotics (and its ethical implications). To encourage further engagement, experimentation, and course and lesson design, The Robotics Primer is accompanied by a free robot programming exercise workbook that implements many of the ideas on the book on iRobot platforms. The Robotics Primer is unique as a principled, pedagogical treatment of the topic that is accessible to a broad audience; the only prerequisites are curiosity and attention. It can be used effectively in an educational setting or more informally for self-instruction. The Robotics Primer is a springboard for readers of all backgrounds—including students taking robotics as an elective outside the major, graduate students preparing to specialize in robotics, and K-12 teachers who bring robotics into their classrooms.

Bots! Robotics Engineering - Kathy Ceceri
2019

Hands-on STEM activities, essential questions, and coding challenges

She's Building a Robot - Mick Liubinskas
2020-11-17

She's Building A Robot is the fictional story of AZ, a talented teenage girl who decides to fight gender stereotypes by entering a robot building competition.

LEGO Technic Robotics - Mark Rollins
2013-03-25

Provides information on using the LEGO Technic robot kit, including how to build a robot body, using the power functions, enabling a robot to walk.

Top STEM Careers in Technology - Laura La Bella
2014-07-15

The push is on for students to embrace STEM (science, technology, engineering, mathematics) disciplines, first in school and then in the workplace. This series highlights the career possibilities within each subject area under the STEM umbrella. The focus of this title lands squarely on career fields such as computing, engineering technology, medicine, environmental sustainability, packaging science, and automotive service. Jobs that make use of

advanced technologies in the course of the workday, such as nursing and land surveying, are included as well. Completing the coverage are chapters on landing a first tech job and advancing one's career.

Robot Building for Beginners, Third Edition
- David Cook 2015-09-09

"I wrote this book because I love building robots. I want you to love building robots, too. It took me a while to learn about many of the tools and parts in amateur robotics. Perhaps by writing about my experiences, I can give you a head start."--David Cook
Robot Building for Beginners, Third Edition provides basic, practical knowledge on getting started in amateur robotics. There is a mix of content: from serious reference tables and descriptions to personal stories and humorous bits. The robot described and built in this book is battery powered and about the size of a lunch box. It is autonomous; that is, it isn't remote controlled. The book is broken up into small chapters, suitable for bedtime (or bathroom) reading. The characteristics and purposes of each major component (resistor, transistor, wire, and motor) are described, followed by a hands-on experiment to demonstrate. Not only does this help the reader to understand a particular piece, but it also prepares them with processes to learn new parts on their own. An appendix offers an introduction to 3D printing and parts of the robot can, as an alternative, be "printed" using a 3D printer. The master project of the book is a simple, entertaining, line-following robot.

Robot Builder's Cookbook - Owen Bishop
2007-09-10

Owen Bishop introduces, through hands-on project work, the mechanics, electronics and programming involved in practical robot design-and-build. The use of the PIC microcontroller throughout provides a painless introduction to programming whilst harnessing the power of a highly popular microcontroller used by students and design engineers worldwide. This is a book for first-time robot builders, advanced builders wanting to know more about programming robots and students in Further and Higher Education tackling microcontroller-based practical work. They will all find this book a unique and exciting source of projects, ideas and techniques, to be combined into a wide range of

fascinating robots. · Full step-by-step instructions for 5 complete self-build robots · Introduces key techniques in electronics, programming and construction - for robust robots that work first time · Illustrations, close-up photographs and a lively, readable text make this a fun and informative guide for novice and experienced robot builders

Technology - Moira Butterfield 2015-12-15
Words, photos, charts, and illustrations combine to introduce students to the wonders of technology. All these are arranged in short bursts of information that will ease comprehension for learners of all kinds.

Robot Building For Dummies - Roger Arrick 2011-05-09

Discover what robots can do and how they work Find out how to build your own robot and program it to perform tasks Ready to enter the robot world? This book is your passport! It walks you through building your very own little metal assistant from a kit, dressing it up, giving it a brain, programming it to do things, even making it talk. Along the way, you'll gather some tidbits about robot history, enthusiasts' groups, and more. The Dummies Way * Explanations in plain English * "Get in, get out" information * Icons and other navigational aids * Tear-out cheat sheet * Top ten lists * A dash of humor and fun
Robot Building for Beginners, Third Edition - David Cook 2015-09-02

"I wrote this book because I love building robots. I want you to love building robots, too. It took me a while to learn about many of the tools and parts in amateur robotics. Perhaps by writing about my experiences, I can give you a head start."--David Cook
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Intermediate Robot Building - David Alan Cook 2010

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 your robot "comes to life". This book is perfect for loyal readers of my first book, *Robot Building For Beginners*, as well as for backyard scientists that have already taught themselves the basics. Enjoy! --Book Jacket.

Robot Experiments - Ed Sobey, PhD 2012-09
Build your own robot! Learn what makes a robot work. Then design, build, and program your very own robot. The experiments in this book will guide you through the field of robotics. Many experiments include ideas you can use for your own science fair project.

Rise of the Robots - Martin Ford 2015-05-05
The New York Times-bestselling guide to how automation is changing the economy, undermining work, and reshaping our lives Winner of Best Business Book of the Year awards from the Financial Times and from Forbes "Lucid, comprehensive, and unafraid...;an indispensable contribution to a long-running argument."--Los Angeles Times
What are the jobs of the future? How many will there be? And who will have them? As technology continues to accelerate and machines begin taking care of themselves, fewer people will be necessary. Artificial intelligence is already well on its way to making "good jobs" obsolete: many paralegals, journalists, office workers, and even computer programmers are poised to be replaced by robots and smart software. As progress continues, blue and white collar jobs alike will evaporate, squeezing working- and middle-class families ever further. At the same time, households are under assault from exploding costs, especially from the two major industries-education and health care-that, so far, have not been transformed by information technology. The result could well be massive unemployment and inequality as well as the

implosion of the consumer economy itself. The past solutions to technological disruption, especially more training and education, aren't going to work. We must decide, now, whether the future will see broad-based prosperity or catastrophic levels of inequality and economic insecurity. Rise of the Robots is essential reading to understand what accelerating technology means for our economic prospects—not to mention those of our children—as well as for society as a whole.

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."

Robot Building for Beginners - David Cook
2010-07-30

"I wrote this book because I love building robots. I want you to love building robots, too. It took me a while to learn about many of the tools and parts in amateur robotics. Perhaps by writing about my experiences, I can give you a head start." —David Cook *Robot Building for Beginners, Second Edition* is an update of David Cook's best-selling *Robot Building for Beginners*. This book continues its aim at teenagers and adults who have an avid interest in science and

dream of building household explorers. No formal engineering education is assumed. The robot described and built in this book is battery powered and about the size of a lunchbox. It is autonomous. That is, it isn't remote controlled. You'll begin with some tools of the trade, and then work your way through prototyping, robot bodybuilding, and eventually soldering your own circuit boards. By the book's end, you will have a solid amateur base of understanding so that you can begin creating your own robots to vacuum your house or maybe even rule the world!

Deep Learning for Robot Perception and Cognition - Alexandros Iosifidis 2022-02-25

Deep Learning for Robot Perception and Cognition introduces a broad range of topics and methods in deep learning for robot perception and cognition together with end-to-end methodologies. The book provides the conceptual and mathematical background needed for approaching a large number of robot perception and cognition tasks from an end-to-end learning point-of-view. The book is suitable for students, university and industry researchers and practitioners in Robotic Vision, Intelligent Control, Mechatronics, Deep Learning, Robotic Perception and Cognition tasks. Presents deep learning principles and methodologies Explains the principles of applying end-to-end learning in robotics applications Presents how to design and train deep learning models Shows how to apply deep learning in robot vision tasks such as object recognition, image classification, video analysis, and more Uses robotic simulation environments for training deep learning models Applies deep learning methods for different tasks ranging from planning and navigation to biosignal analysis

Cognitive Computing for Human-Robot Interaction - Mamta Mittal 2021-08-13

Cognitive Computing for Human-Robot Interaction: Principles and Practices explores the efforts that should ultimately enable society to take advantage of the often-heralded potential of robots to provide economical and sustainable computing applications. This book discusses each of these applications, presents working implementations, and combines coherent and original deliberative architecture for human-robot interactions (HRI). Supported by experimental results, it shows how explicit

knowledge management promises to be instrumental in building richer and more natural HRI, by pushing for pervasive, human-level semantics within the robot's deliberative system for sustainable computing applications. This book will be of special interest to academics, postgraduate students, and researchers working in the area of artificial intelligence and machine learning. Key features: Introduces several new contributions to the representation and management of humans in autonomous robotic systems; Explores the potential of cognitive computing, robots, and HRI to generate a deeper understanding and to provide a better contribution from robots to society; Engages with the potential repercussions of cognitive computing and HRI in the real world. Introduces several new contributions to the representation and management of humans in an autonomous robotic system Explores cognitive computing, robots and HRI, presenting a more in-depth understanding to make robots better for society Gives a challenging approach to those several repercussions of cognitive computing and HRI in the actual global scenario

Programming Robots with ROS - Morgan Quigley 2015-11-16

Chapter 3. Topics; Publishing to a Topic; Checking That Everything Works as Expected; Subscribing to a Topic; Checking That Everything Works as Expected; Latched Topics; Defining Your Own Message Types; Defining a New Message; Using Your New Message; When Should You Make a New Message Type?; Mixing Publishers and Subscribers; Summary; Chapter 4. Services; Defining a Service; Implementing a Service; Checking That Everything Works as Expected; Other Ways of Returning Values from a Service; Using a Service; Checking That Everything Works as Expected; Other Ways to Call Services; Summary.

Probabilistic Robotics - Sebastian Thrun 2005-08-19

An introduction to the techniques and algorithms of the newest field in robotics. Probabilistic robotics is a new and growing area in robotics, concerned with perception and control in the face of uncertainty. Building on the field of mathematical statistics, probabilistic robotics endows robots with a new level of robustness in real-world situations. This book

introduces the reader to a wealth of techniques and algorithms in the field. All algorithms are based on a single overarching mathematical foundation. Each chapter provides example implementations in pseudo code, detailed mathematical derivations, discussions from a practitioner's perspective, and extensive lists of exercises and class projects. The book's Web site, www.probabilistic-robotics.org, has additional material. The book is relevant for anyone involved in robotic software development and scientific research. It will also be of interest to applied statisticians and engineers dealing with real-world sensor data.

The LEGO BOOST Activity Book - Daniele Benedettelli 2018-11-27

At last, fans of the LEGO BOOST robot building kit have the learning resource they've been missing! Enter The LEGO BOOST Activity Book: a full-color guide that will help readers learn how to build and code LEGO creations that move, explore their environment, grab and lift objects, and more. The LEGO BOOST kit lets younger builders create fun, multifunctional robots by combining bricks with code, but it doesn't come with a manual. With the help of this complete guide to the LEGO BOOST set, you'll be on your way to building and programming BOOST robots in no time. You'll begin your exploration by building a basic rover robot called MARIO to help you learn the fundamentals of the BOOST programming environment. Next, you'll add features to your rover to control its movement and make it repeat actions and react to colors and sounds. Once you've learned some programming basics, you'll learn how to program your robot to do things like follow lines on the ground, scan its environment to decide where to go, and even play darts. As final projects, you'll create two complete robots: BrickPecker to help you organize your bricks and CYBOT, a robot that talks, shoots objects, and executes voice commands. As you advance through the book, optional lessons aim to deepen your understanding of basic robotics concepts. Brain BOOSTer sections let you dig into the math and engineering behind your builds while a host of experiments seek to test your skills and encourage you to do more with your robots. With countless illustrations, extensive explanations,

and a wealth of coding examples to guide you, The LEGO BOOST Activity Book is sure to take you from beginning builder to robotics whiz and give your robot-building brain that needed boost!

Beginning Robotics Programming in Java with LEGO Mindstorms - Wei Lu 2016-11-15

Discover the difference between making a robot move and making a robot think. Using Mindstorms EV3 and LeJOS—an open source project for Java Mindstorms projects—you'll learn how to create Artificial Intelligence (AI) for your bot. Your robot will learn how to problem solve, how to plan, and how to communicate. Along the way, you'll learn about classical AI algorithms for teaching hardware how to think; algorithms that you can then apply to your own robotic inspirations. If you've ever wanted to learn about robotic intelligence in a practical, playful way, *Beginning Robotics Programming in Java with LEGO Mindstorms* is for you. What you'll learn: Build your first LEGO EV3 robot step-by-step Install LeJOS and its firmware on Lego EV3 Create and upload your first Java program into Lego EV3 Work with Java programming for motors Understand robotics behavior programming with sensors Review common AI algorithms, such as DFS, BFS, and Dijkstra's Algorithm Who this book is for: Students, teachers, and makers with basic Java programming experience who want to learn how to apply Artificial Intelligence to a practical robotic system.

Intermediate Robot Building - David Cook 2004-04-06

For readers of *Robot Building for Beginners* (Apress, 2002), welcome to the next level! *Intermediate Robot Building* offers the kind of real-world knowledge that only an experienced robot builder can offer—the kind of knowledge beginners usually have to learn through mistakes. 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."

Make: Arduino Bots and Gadgets - Tero Karvinen 2011-03-17

Want to build your own robots, turn your ideas into prototypes, control devices with a computer, or make your own cell phone applications? It's a snap with this book and the Arduino open source electronic prototyping platform. Get started with six fun projects and achieve impressive results quickly. Gain the know-how and experience to invent your own cool gadgets. With Arduino, building your own embedded gadgets is easy, even for beginners. Embedded systems are everywhere—inside cars, children's toys, and mobile phones. This book will teach you the basics of embedded systems and help you build your first gadget in just a few days. Each learn-as-you-build project that follows will add to your knowledge and skills. Experiment with Arduino, the popular microcontroller board Build robots and electronic projects with easy-to-follow instructions Turn your ideas into working physical prototypes Use Android phones as remote controls in your projects Work with an uncomplicated programming language created for artists, designers, and hobbyists Get everyone involved, with projects that even beginners can build

Perspectives on Digital Humanism - Hannes Werthner 2021-11-23

This open access book aims to set an agenda for research and action in the field of Digital Humanism through short essays written by selected thinkers from a variety of disciplines, including computer science, philosophy, education, law, economics, history, anthropology, political science, and sociology. This initiative emerged from the Vienna Manifesto on Digital Humanism and the associated lecture series. Digital Humanism deals with the complex relationships between

people and machines in digital times. It acknowledges the potential of information technology. At the same time, it points to societal threats such as privacy violations and ethical concerns around artificial intelligence, automation and loss of jobs, ongoing monopolization on the Web, and sovereignty. Digital Humanism aims to address these topics with a sense of urgency but with a constructive mindset. The book argues for a Digital Humanism that analyses and, most importantly, influences the complex interplay of technology and humankind toward a better society and life while fully respecting universal human rights. It is a call to shaping technologies in accordance with human values and needs.

Culture and Human-Robot Interaction in Militarized Spaces - Julie Carpenter

2016-02-26

Explosive Ordnance Disposal (EOD) personnel are some of the most highly trained people in the military, with a job description that spans defusing unexploded ordnance to protecting VIP's and state dignitaries. EOD are also one of the first military groups to work with robots every day. These robots have become an increasingly important tool in EOD work, enabling people to work at safer distances in many dangerous situations. Based on exploratory research investigating interactions between EOD personnel and the robots they use, this study richly describes the nuances of these reciprocal influences, especially those related to operator emotion associated with the robots. In particular, this book examines the activities, processes and contexts that influence or constrain everyday EOD human-robot interactions, what human factors are shaping the (robotic) technology and how people and culture are being changed by using it. The findings from this research have implications for future personnel training, and the refinement of

robot design considerations for many fields that rely on critical small group communication and decision-making skills.

STEMathematics: Exercises in Applied Computation and Modeling (Volume 1) - Elliott Ostler 2015-08-03

STEMathematics is an instructional resource designed primarily for secondary level mathematics teachers and students interested in discovering how mathematics describes (and is applied to) our natural world. This resource provides both the historical elements and the technical aspects of various topics in mathematics that provide instructional context in the sciences, technology, and engineering, (STEM) disciplines. The purpose of STEMathematics is to help teachers become more personally interested in the topics they teach and to gain a broader perspective of how mathematics can be integrated with other subject disciplines.

The Wild Robot - Peter Brown 2016-04-19

Wall-E meets Hatchet in this New York Times bestselling illustrated middle grade novel from Caldecott Honor winner Peter Brown Can a robot survive in the wilderness? When robot Roz opens her eyes for the first time, she discovers that she is all alone on a remote, wild island. She has no idea how she got there or what her purpose is--but she knows she needs to survive. After battling a violent storm and escaping a vicious bear attack, she realizes that her only hope for survival is to adapt to her surroundings and learn from the island's unwelcoming animal inhabitants. As Roz slowly befriends the animals, the island starts to feel like home--until, one day, the robot's mysterious past comes back to haunt her. From bestselling and award-winning author and illustrator Peter Brown comes a heartwarming and action-packed novel about what happens when nature and technology collide.