

Neato Robotics User Guide

The creator of the popular cleaning website Clean Mama and author of Clean Mama's Guide to a Healthy Home shows you how to establish systems and rituals to transform your home into a clean, organized, and comfortable space for you and your family. We all want our homes to be cozy and comfortable spaces where we can leave the challenges of the outside world behind and connect with our families. But too often the mess and disorder only add stress. For years, Becky Rapinchuk has taught people how to simplify and improve cleaning routines, and now she reveals a game-changing method to help us find joy and make our chores effortless. By pairing up systems—how we get things done so that they become automatic—with rituals—tasks that bring calm and happiness—we can feel more at peace in our homes. Walking readers through each room of the house, Rapinchuk shows how to put new systems and rituals in place that will make the whole home operate more efficiently. Featuring decision trees, checklists, and space to reflect and record progress, Clean Mama's Guide to a Peaceful Home makes homekeeping a breeze, allowing us to slow down and focus on the things that really matter.

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.

Cognitive sciences have been involved under numerous accounts to explain how humans interact with technology, as well as to design technological instruments tailored to human needs. As technological advancements in fields like wearable and ubiquitous computing, virtual reality, robotics and artificial intelligence are presenting novel modalities for interacting with technology, there are opportunities for deepening, exploring, and even rethinking the theoretical foundations of human technology use. This volume entitled “Cognition and Interaction: From Computers to Smart Objects

and Autonomous Agents” is a collection of articles on the impacts that novel 3 September *Frontiers in Psychology* 2019 | Cognition and Interaction interactive technologies are producing on individuals. It puts together 17 works, spanning from research on social cognition in human-robot interaction to studies on neural changes triggered by Internet use, that tackle relevant technological and theoretical issues in human-computer interaction, encouraging us to rethink how we conceptualize technology, its use and development. The volume addresses fundamental issues at different levels. The first part revolves around the biological impacts that technologies are producing on our bodies and brains. The second part focuses on the psychological level, exploring how our psychological characteristics may affect the way we use, understand and perceive technology, as well as how technology is changing our cognition. The third part addresses relevant theoretical problems, presenting reflections that aim to reframe how we conceptualize ourselves, technology and interaction itself. Finally, the last part of the volume pays attention to the factors involved in the design of technological artifacts, providing suggestions on how we can develop novel technologies closer to human needs. Overall, it appears that human-computer interaction will have to face a variety of challenges to account for the rapid changes we are witnessing in the current technology landscape.

In the mid-twentieth century, Henry Dreyfuss—widely considered the father of industrial design—pioneered a user-centered approach to design that focuses on studying people's behaviors and attitudes as a key first step in developing successful products. In the intervening years, user-centered design has expanded to undertake the needs of differently

abled users and global populations as well as the design of complex systems and services. Beautiful Users explores the changing relationship between designers and users and considers a range of design methodologies and practices, from user research to hacking, open source, and the maker culture.

Human-Machine Shared Contexts

The Essentials of Interaction Design

Kill [redacted]

About Face 3

Effortless Systems and Joyful Rituals for a Calm, Cozy Home

Introduction to AI Robotics, second edition

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Mike Mosher's "Some Aspects of Californian Cyberpunk" vividly reminds us of the influence of West Coast counterculture on cyberpunks, with special emphasis on 1960s theoretical gurus such as Timothy Leary and Marshall McLuhan, who explored the frontiers of inner space as well as the global village. Frenchy Lunning's "Cyberpunk Redux: Dérives in the Rich Sight of Post-Anthropocentric Visuality" examines how the heritage of Ridley Scott's techno-noir film Blade Runner (1982) that preceded Gibson's Neuromancer (1984) keeps revolutionizing the art of visuality, even in the age of the Anthropocene. If you read Lunning's essay along with Lidia Meras's "European Cyberpunk Cinema," which closely analyzes major European cyberpunkish dystopian films

Renaissance (2006) and Metropia (2009) and Elana Gomel's "Recycled Dystopias: Cyberpunk and the End of History," your understanding of the cinematic and post-utopian possibility of cyberpunk will become more comprehensive. For a cutting-edge critique of cyberpunk manga, let me recommend Martin de la Iglesia's "Has Akira Always Been a Cyberpunk Comic?" which radically redefines the status of Akira (1982-1993) as trans-generic, paying attention to the genre consciousness of the contemporary readers of its Euro-American editions. Next, Denis Taillandier's "New Spaces for Old Motifs? The Virtual Worlds of Japanese Cyberpunk" interprets the significance of Japanese hardcore cyberpunk novels such as Goro Masaki's Venus City (1995) and Hirotaka Tobi's Grandes Vacances (2002; translated as The Thousand Year Beach, 2018) and Ragged Girl (2006), paying special attention to how the authors created their virtual landscape in a Japanese way. For a full discussion of William Gibson's works, please read Janine Tobek and Donald Jellerson's "Caring About the Past, Present, and Future in William Gibson's Pattern Recognition and Guerilla Games' Horizon: Zero Dawn" along with my own "Transpacific

Cyberpunk: Transgeneric Interactions between Prose, Cinema, and Manga. The former reconsiders the first novel of Gibson's new trilogy in the 21st century not as realistic but as participatory, whereas the latter relocates Gibson's essence not in cyberspace but in a junkyard, making the most of his post-Dada/Surrealistic aesthetics and "Lo-Tek" way of life, as is clear in the 1990s "Bridge" trilogy.

Implement complex iOS user interfaces with ease using Swift About This Book Build compelling user interfaces that users will enjoy using the iOS UIKit framework Make your iOS apps easily recognizable and familiar with the UIKit framework Use this comprehensive, step-by-step guide to create a complete custom layout Who This Book Is For This easy-to-follow guide is perfect for beginner-level iOS developers who want to become proficient in user interface development. It would also be useful for experienced iOS developers who need a complete overview of this broad topic all in one place, without having to consult various sources. What You Will Learn Understand the basic requirements to work with iOS user interfaces Get to know about the UI tools, frameworks, and built-in components Plot

dynamic layout structures using Auto Layout Shape and implement adaptive user interfaces for different screen sizes Draw and animate your user interfaces using the CALayer and UIKit animations Intercept and handle user touches to create user interface interactivity Create and depict totally custom controls Design with iOS through Core Graphics In Detail Through this comprehensive one-stop guide, you'll get to grips with the entire UIKit framework and in a flash, you'll be creating modern user interfaces for your iOS devices using Swift. Starting with an overview of the iOS drawing system and the available tools, you will then learn how to use these technologies to create adaptable layouts and custom elements for your applications. Next, you'll be introduced to other topics such as animation and code-drawing with Core Graphics, which will give you all the knowledge you need to create astonishing user interfaces. By the end of this book, you will have a solid foundation in iOS user interface development and will have gained valuable insights on the process of building firm and complex UIs. Style and approach This concise yet information-packed guide is full of step-by-step instructions and screenshots of real-life examples, delivered

in a direct manner, to get you creating modern user interfaces for your iOS devices using SWIFT in no time.

This book explains why AI is unique, what legal and ethical problems it could cause, and how we can address them. It argues that AI is unlike any other previous technology, owing to its ability to take decisions independently and unpredictably. This gives rise to three issues: responsibility--who is liable if AI causes harm; rights--the disputed moral and pragmatic grounds for granting AI legal personality; and the ethics surrounding the decision-making of AI. The book suggests that in order to address these questions we need to develop new institutions and regulations on a cross-industry and international level. Incorporating clear explanations of complex topics, Robot Rules will appeal to a multi-disciplinary audience, from those with an interest in law, politics and philosophy, to computer programming, engineering and neuroscience.

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.probablistic-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.

A Survey

The Proven Method for Keeping Your Home Organized, Clean, and Beautiful in Just 10 Minutes a Day

Amazon Echo - Das ultimative Handbuch: Guide, Tipps und wichtige Funktionen

Robots in Industries: Patent Analysis and Business Opportunities

The Attribution of (In)Animacy to Robot Technology

Robot Rights

Programming Computer Vision with Python

Seit März 2017 ist das Audiogerät Amazon Echo offiziell in Deutschland erhältlich und bricht sämtliche Verkaufsrekorde! Der Echo mag auf den ersten Blick unscheinbar wirken, doch hält sein spannendes Innenleben viele Überraschungen bereit: So kann der integrierte Alexa Voice Service des Echos Musik abspielen, Fragen beantworten, Begriffe definieren, Hörbücher vorlesen, Nachrichten, Verkehrs- und Wetterinformationen liefern, über Sportergebnisse und Spielpläne informieren und sich mit der entsprechenden Hardware sogar mit Geräten in Ihrem Haushalt vernetzen lassen, um beispielsweise Lampen, Ventilatoren, Lichtschalter, Steckdosen, Jalousien oder Thermostate per Sprachbefehl zu kontrollieren. Diese Anleitung soll Ihnen als ideales Nachschlagewerk dienen und Ihnen dabei helfen, Schritt für Schritt alles über die wichtigsten Funktionen Ihres Echos zu lernen, um das volle Potenzial des Gerätes auszuschöpfen. Info: Das vorliegende Buch, welches in seiner Urfassung am 25. Oktober 2016 erschienen ist, belegte als erste deutschsprachige Anleitung von Amazon Echo wochenlang die Bestsellerlisten und wurde seitdem an die neuesten Geräte-Aktualisierungen angepasst. Inhalt des Buches: 1. Amazon Echo in Deutschland 2. Echo im Detail Äußere Details Technische Details Energieverbrauch Praktisches

Zubehör (Auswahl) 3. Die ersten Schritte Echo einrichten Das Aktivierungswort Eine Technologie, die begeistert Die Farben des Lichtrings Das Echo-Prinzip Sprachbefehle für Alexa 4. Basisfunktionen Lautstärke einstellen Erinnerungen, Wecker und Timer Radio hören Musik abspielen Echo mit Fire TV verbinden Ein Hörbuch von Audible anhören Ein Kindle-Buch vorlesen lassen Fußball-Audiostream abspielen Bluetooth-Verbindung nutzen Telefonieren und Textnachrichten versenden Multiroom-Gruppenwiedergabe Persönliche Daten verwalten 5. Die Alexa-App: Übersicht Die Kategorien Geräteeinstellungen Alexa-Einstellungen 6. Echo als Smart-Home-Zentrale Heizungssteuerung Beleuchtung Lautsprecher Steckdosen Saugroboter Smart-Home-Plattform 7. Erweiterte Funktionen - Alexa lernt dazu Nützliche Skills Die Region Ihres Echos ändern Yonomi für Logitech Harmony Hub IFTTT mit Echo verbinden 8. Die erweiterte Alexa-Familie Echo Dot Echo Show Echo Plus Fire TV Stick Echo Spot Echo Buttons Echo Look Echo Tap 9. Problembehandlung

The Guide to Robotic Vacuum Cleaners Vacuum Your Floors Automatically Mossy Feet Books Human-Machine Shared Contexts considers the foundations, metrics, and applications of human-machine systems. Editors and authors debate whether machines, humans, and systems should speak only to each other, only to humans, or to

both and how. The book establishes the meaning and operation of “ shared contexts between humans and machines; it also explores how human-machine systems affect targeted audiences (researchers, machines, robots, users) and society, as well as future ecosystems composed of humans and machines. This book explores how user interventions may improve the context for autonomous machines operating in unfamiliar environments or when experiencing unanticipated events; how autonomous machines can be taught to explain contexts by reasoning, inferences, or causality, and decisions to humans relying on intuition; and for mutual context, how these machines may interdependently affect human awareness, teams and society, and how these "machines" may be affected in turn. In short, can context be mutually constructed and shared between machines and humans? The editors are interested in whether shared context follows when machines begin to think, or, like humans, develop subjective states that allow them to monitor and report on their interpretations of reality, forcing scientists to rethink the general model of human social behavior. If dependence on machine learning continues or grows, the public will also be interested in what happens to context shared by users, teams of humans and machines, or society when these machines malfunction. As scientists

and engineers "think through this change in human terms," the ultimate goal is for AI to advance the performance of autonomous machines and teams of humans and machines for the betterment of society wherever these machines interact with humans or other machines. This book will be essential reading for professional, industrial, and military computer scientists and engineers; machine learning (ML) and artificial intelligence (AI) scientists and engineers, especially those engaged in research on autonomy, computational context, and human-machine shared contexts; advanced robotics scientists and engineers; scientists working with or interested in data issues for autonomous systems such as with the use of scarce data for training and operations with and without user interventions; social psychologists, scientists and physical research scientists pursuing models of shared context; modelers of the internet of things (IOT); systems of systems scientists and engineers and economists; scientists and engineers working with agent-based models (ABMs); policy specialists concerned with the impact of AI and ML on society and civilization; network scientists and engineers; applied mathematicians (e.g., holon theory, information theory); computational linguists; and blockchain scientists and engineers. Discusses the foundations, metrics, and applications of human-machine systems Considers advances and

challenges in the performance of autonomous machines and teams of humans Debates theoretical human-machine ecosystem models and what happens when machines malfunction

'Provocative and compelling, it is a spectacular debut' - Daily Mail _____ Is murder ever morally right? And is a murderer necessarily bad? These two questions waltz through the maddening mind of Michael, the brilliant, terrifying, fiendishly smart creation at the centre of this winking dark gem of a literary thriller. Michael lost his wife in a terrorist attack on a London train. Since then, he has been seeing a therapist to help him come to terms with his grief - and his anger. He can't get over the fact that the man he holds responsible has seemingly got away scot-free. He doesn't blame the bombers, who he considers only as the logical conclusion to a long chain of events. No, to Michael's mind, the ultimate cause is the politician whose cynical policies have had such deadly impact abroad. His therapist suggests that he write his feelings down to help him forgive and move on, but as a retired headteacher, Michael believes that for every crime there should be a fitting punishment - and so in the pages of his diary he begins to set out the case for, and set about committing, murder. Waltzing through the darkling journal of a brilliant mind put to serious misuse, Kill [redacted] is a powerful and provocative

exploration of the contours of grief and the limits of moral justice, and a blazing condemnation of all those who hold, and abuse, power. ONE OF THE BEST DEBUT NOVELS of 2019 (the i)

Journeys in 3D Printing

Learning iOS UI Development

Simply Clean

More Than Machines?

Using Python and OpenCV

Anleitung, Alexa-App, Skills, Smart Home, Sprachbefehle, IFTTT, uvm.

Probabilistic Robotics

Robots have been applied in a broad range of areas, including assembly lines and factories, warehouse logistics, military defense, and medical care, to name a few. Their great business potential has lured investors and technology companies. This book provides an overview of robot technologies, including service robots, industrial robots, and medical robots, as well as the related AI (Artificial Intelligence) and sensor technologies. Using patent mining techniques, comprising of text and data mining, this book reveals major vendors' patent deployment and technology trends. Also included are the business outlook and opportunities for perspective entrants.

Every year, 6 million companies and more than 100,000 products are launched. They all need an awesome name, but many (such as Xobni, Svbtle, and Doostang) look like the results of a drunken Scrabble game. In this entertaining and engaging book, ace naming consultant Alexandra Watkins explains how anyone—even noncreative

types—can create memorable and buzz-worthy brand names. No degree in linguistics required. The heart of the book is Watkins's proven SMILE and SCRATCH Test—two acronyms for what makes or breaks a name. She also provides up-to-date advice, like how to make sure that Siri spells your name correctly and how to nab an available domain name. And you'll see dozens of examples—the good, the bad, and the “so bad she gave them an award.”

Alexandra Watkins is not afraid to name names.

In *Clean Mama's Guide to a Healthy Home*, Becky Rapinchuk, author of *Simply Clean* and creator of the popular cleaning website *Clean Mama*, provides a step-by-step guide to take charge of your home's wellness with a comprehensive, all-natural cleaning system. Scientific evidence points to a clear link between household chemicals and a number of diseases and chronic health issues. Drawing on this research, Rapinchuk's program delivers an organized, beautiful, toxic-free, environmental-friendly household by providing readers with: A room-by-room guide to cleaning and removing harmful toxins in one's home A Weekend Kick-Start Detox to ease readers into the program Over 50 simple, organic DIY cleaning product recipes Easy to digest research on common toxic products in the home, why they are dangerous to our health, and what to replace them with Tips and tools from a trusted source to create cleaner, safer homes, resulting in healthier families Cleanliness is about detoxing, embracing organic, all-natural methods and products, and protecting the environment. Moms look to Becky to guide them in the best cleaning practices for their home, and will welcome *Clean Mama's Guide to a Healthy Home*, which shows

that going natural isn't just a better way to a cleaner home—it's vital to the health of our bodies, our families, and our planet.

An easy-to-follow guide that will help you build robots using with ease

KEY FEATURES ? Simplified coverage on fundamentals of building a robot platform. ? Learn to program Raspberry Pi for interacting with hardware. ? Cutting-edge coverage on autonomous motion, mapping, and path planning algorithms for advanced robotics.

DESCRIPTION Practical Robotics in C++ teaches the complete spectrum of Robotics, right from the setting up a computer for a robot controller to putting power to the wheel motors. The book brings you the workshop knowledge of the electronics, hardware, and software for building a mobile robot platform. You will learn how to use sensors to detect obstacles, how to train your robot to build itself a map and plan an obstacle-avoiding path, and how to structure your code for modularity and interchangeability with other robot projects. Throughout the book, you can experience the demonstrations of complete coding of robotics with the use of simple and clear C++ programming. In addition, you will explore how to leverage the Raspberry Pi GPIO hardware interface pins and existing libraries to make an incredibly capable machine on the most affordable computer platform ever.

WHAT YOU WILL LEARN ? Write code for the motor drive controller. ? Build a Map from Lidar Data. ? Write and implement your own autonomous path-planning algorithm. ? Write code to send path waypoints to the motor drive controller autonomously. ? Get to know more about robot mapping and navigation.

WHO THIS BOOK

IS FOR This book is most suitable for C++ programmers who have keen interest in robotics and hardware programming. All you need is just a good understanding of C++ programming to get the most out of this book.

TABLE OF CONTENTS 1. Choose and Set Up a Robot Computer 2. GPIO Hardware Interface Pins Overview and Use 3. The Robot Platform 4. Types of Robot Motors and Motor Control 5. Communication with Sensors and other Devices 6. Additional Helpful Hardware 7. Adding the Computer to Control your Robot 8. Robot Control Strategy 9. Coordinating the Parts 10. Maps for Robot Navigation 11. Robot Tracking and Localization 12. Autonomous Motion 13. Autonomous Path Planning 14. Wheel Encoders for Odometry 15. Ultrasonic Range Detectors 16. IMUs: Accelerometers, Gyroscopes, and Magnetometers 17. GPS and External Beacon Systems 18. LIDAR Devices and Data 19. Real Vision with Cameras 20. Sensor Fusion 21. Building and Programming an Autonomous Robot

Beginning Robotics with Raspberry Pi and Arduino

Robotic Mapping and Exploration

Visualizing Quaternions

A Compendium

The Robot and Automation Almanac - 2021

Cyberpunk in a Transnational Context

Springer Handbook of Robotics

Biped robots represent a very interesting research subject, with several particularities and scope topics, such as: mechanical design, gait simulation, patterns generation, kinematics, dynamics,

equilibrium, stability, kinds of control, adaptability, biomechanics, cybernetics, and rehabilitation technologies. We have diverse problems related to these topics, making the study of biped robots a very complex subject, and many times the results of researches are not totally satisfactory. However, with scientific and technological advances, based on theoretical and experimental works, many researchers have collaborated in the evolution of the biped robots design, looking for to develop autonomous systems, as well as to help in rehabilitation technologies of human beings. Thus, this book intends to present some works related to the study of biped robots, developed by researchers worldwide.

The Knowledge Seeker is a useful system to develop various intelligent applications such as ontology-based search engine, ontology-based text classification system, ontological agent system, and semantic web system etc. The Knowledge Seeker contains four different ontological components. First, it defines the knowledge representation model ;V Ontology Graph. Second, an ontology learning process that based on chi-square statistics is proposed for automatic learning an Ontology Graph from texts for different domains. Third,

it defines an ontology generation method that transforms the learning outcome to the Ontology Graph format for machine processing and also can be visualized for human validation. Fourth, it defines different ontological operations (such as similarity measurement and text classification) that can be carried out with the use of generated Ontology Graphs. The final goal of the KnowledgeSeeker system framework is that it can improve the traditional information system with higher efficiency. In particular, it can increase the accuracy of a text classification system, and also enhance the search intelligence in a search engine. This can be done by enhancing the system with machine processable ontology. Help your future genius become the smartest baby in the room by introducing them to robotics with the next installment of the Baby University board book series! Enjoy these simple explanations of complex ideas for your future genius. The perfect robot baby toy or baby engineering book for parents looking to kick start their baby's learning! Robotics for Babies is a colorful, simple introduction to the technology behind robots. This engineering board book is full of scientific and mathematical information from experts Dr.

Microphones (MIC) are used to capture audio data. The 2014 MIC is a 4-core processor with 9 channels of audio. It supports 3D audio recording and playback. The MIC also supports OLED displays and 3D printing. The MIC is a powerful tool for research and development in the field of human-robot interaction.

Human-Robot Interaction: A Survey presents a unified treatment of HRI-related issues, identifies key themes, and discusses challenge problems that are likely to shape the field in the near future. The survey includes research results from a cross section of the universities, government efforts, industry labs, and countries that contribute to HRI, and a cross section of the disciplines that contribute to the field, such as human factors, robotics, cognitive psychology and design

A provocative attempt to think about what was previously considered unthinkable: a serious philosophical case for the rights of robots. We are in the midst of a robot invasion, as devices of different configurations and capabilities slowly but

surely come to take up increasingly important positions in everyday social reality—self-driving vehicles, recommendation algorithms, machine learning decision making systems, and social robots of various forms and functions. Although considerable attention has already been devoted to the subject of robots and responsibility, the question concerning the social status of these artifacts has been largely overlooked. In this book, David Gunkel offers a provocative attempt to think about what has been previously regarded as unthinkable: whether and to what extent robots and other technological artifacts of our own making can and should have any claim to moral and legal standing. In his analysis, Gunkel invokes the philosophical distinction (developed by David Hume) between “is” and “ought” in order to evaluate and analyze the different arguments regarding the question of robot rights. In the course of his examination, Gunkel finds that none of the existing positions or proposals hold up under scrutiny. In response to this, he then offers an innovative alternative proposal that effectively flips the script on the is/ought problem by introducing another, altogether different way to conceptualize

the social situation of robots and the opportunities and challenges they present to existing moral and legal systems. Can robots learn? Blooma and her friends in the Razzle-Dazzle Robot Club hope so. They build a robot and try to train it to clean up their workshop, but that turns out to be harder than it sounds. Will Clark the Cleaning Robot ever learn to clean up?

Robotics for Babies

Vacuum Your Floors Automatically

Build and Program Real Autonomous Robots Using Raspberry Pi (English Edition)

A Gentle Introduction to ROS

The Futurist Institute

Biped Robots

Clean Mama's Guide to a Healthy Home

LEO the Maker Prince teaches children (both young and old) about 3D printing by following Carla and LEO's journey through Brooklyn. LEO is a walking, talking robot who has the magical ability to to print (in plastic) any object that Carla draws. The other robots have their own special capabilities: H1-H0 prints in metal, Sinclair-10 can find and print objects from a huge catalog of designs, and the others (including AL1C3-D, IRIS-7, and NiXie) have unique talents, too. Readers can come along for the journey, too: all

of the objects in the book are printable one way or another.

If you want a basic understanding of computer vision's underlying theory and algorithms, this hands-on introduction is the ideal place to start. You'll learn techniques for object recognition, 3D reconstruction, stereo imaging, augmented reality, and other computer vision applications as you follow clear examples written in Python. Programming Computer Vision with Python explains computer vision in broad terms that won't bog you down in theory. You get complete code samples with explanations on how to reproduce and build upon each example, along with exercises to help you apply what you've learned. This book is ideal for students, researchers, and enthusiasts with basic programming and standard mathematical skills. Learn techniques used in robot navigation, medical image analysis, and other computer vision applications Work with image mappings and transforms, such as texture warping and panorama creation Compute 3D reconstructions from several images of the same scene Organize images based on similarity or content, using clustering methods Build efficient image retrieval techniques to search for images based on

visual content Use algorithms to classify image content and recognize objects Access the popular OpenCV library through a Python interface

No matter how big your home or busy your schedule, Rapinchuk believes that in just ten minutes a day you can keep your house clean and decluttered. She shares her system to turn cleaning from a chore into an effortless habit, and also shares recipes for organic, environmentally conscious cleaning supplies.

The author has maintained two open-source MATLAB Toolboxes for more than 10 years: one for robotics and one for vision. The key strength of the Toolboxes provide a set of tools that allow the user to work with real problems, not trivial examples. For the student the book makes the algorithms accessible, the Toolbox code can be read to gain understanding, and the examples illustrate how it can be used—instant gratification in just a couple of lines of MATLAB code. The code can also be the starting point for new work, for researchers or students, by writing programs based on Toolbox functions, or modifying the Toolbox code itself. The purpose of this book is to expand on the tutorial material provided with the toolboxes, add many more examples, and to

weave this into a narrative that covers robotics and computer vision separately and together. The author shows how complex problems can be decomposed and solved using just a few simple lines of code, and hopefully to inspire up and coming researchers. The topics covered are guided by the real problems observed over many years as a practitioner of both robotics and computer vision. It is written in a light but informative style, it is easy to read and absorb, and includes a lot of Matlab examples and figures. The book is a real walk through the fundamentals of robot kinematics, dynamics and joint level control, then camera models, image processing, feature extraction and epipolar geometry, and bring it all together in a visual servo system. Additional material is provided at <http://www.petercorke.com/RVC>

Robotics, Vision and Control

*A Do-it-yourself Guide to the Robot Operating System : a Pi Robot Production
Bloomberg Businessweek*

Regulating Artificial Intelligence

Knowledge Seeker - Ontology Modelling for Information Search and Management

Cognition and Interaction: From Computers to Smart Objects and Autonomous Agents

The Guide to Robotic Vacuum Cleaners

We know that robots are just machines. Why then do we often talk about them as if they were alive? Laura Voss explores this fascinating phenomenon, providing a rich insight into practices of animacy (and inanimacy) attribution to robot technology: from science-fiction to robotics R&D, from science communication to media discourse, and from the theoretical perspectives of STS to the cognitive sciences. Taking an interdisciplinary perspective, and backed by a wealth of empirical material, Voss shows how scientists, engineers, journalists - and everyone else - can face the challenge of robot technology appearing »a little bit alive« with a reflexive and yet pragmatic stance.

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.

Introduced 160 years ago as an attempt to generalize complex numbers to higher dimensions, quaternions are now recognized as one of the most important concepts in modern computer graphics. They offer a powerful way to represent rotations and compared to rotation matrices they use less memory, compose faster, and are naturally suited for efficient interpolation of rotations. Despite this, many practitioners have avoided quaternions because of the mathematics used to understand them, hoping that some day a more intuitive description will be available. The wait is over. Andrew Hanson's new book is a fresh perspective on quaternions. The first part of the book focuses on visualizing quaternions to provide the intuition necessary to use them, and includes many illustrative examples to motivate why they are important—a beautiful introduction to those wanting to explore quaternions unencumbered by their mathematical aspects. The second part covers the all-important advanced applications, including quaternion curves, surfaces, and volumes. Finally, for those wanting the full story of the mathematics behind quaternions, there is a gentle introduction to their four-dimensional nature and to Clifford Algebras, the all-encompassing framework for vectors and quaternions. Richly illustrated introduction for the developer, scientist, engineer, or student in computer graphics, visualization, or entertainment computing. Covers both non-mathematical and mathematical approaches to quaternions. ROS (Robot Operating System) is rapidly becoming a de

facto standard for writing interoperable and reusable robot software. This book supplements ROS's own documentation, explaining how to interact with existing ROS systems and how to create new ROS programs using C++, with special attention to common mistakes and misunderstandings. The intended audience includes new or potential ROS users.

Practical Robotics in C++

LEO the Maker Prince

Beautiful Users

Robot Rules

Hello, My Name Is Awesome

The Simple, Room-by-Room Plan for a Natural Home

How to Create Brand Names That Stick

The second edition of this handbook provides a state-of-the-art overview on the various aspects in the rapidly developing field of robotics. Reaching for the human frontier, robotics is vigorously engaged in the growing challenges of new emerging domains. Interacting, exploring, and working with humans, the new generation of robots will increasingly touch people and their lives. The credible prospect of practical robots among humans is the result of the scientific endeavour of a half a century of robotic developments that established robotics as a modern scientific discipline. The ongoing vibrant expansion and strong growth of the field during the last decade has fueled this second edition of the Springer Handbook of Robotics. The first edition of the handbook soon became a landmark in robotics publishing and won the American Association of Publishers PROSE Award for Excellence in Physical

Sciences & Mathematics as well as the organization's Award for Engineering & Technology. The second edition of the handbook, edited by two internationally renowned scientists with the support of an outstanding team of seven part editors and more than 200 authors, continues to be an authoritative reference for robotics researchers, newcomers to the field, and scholars from related disciplines. The contents have been restructured to achieve four main objectives: the enlargement of foundational topics for robotics, the enlightenment of design of various types of robotic systems, the extension of the treatment on robots moving in the environment, and the enrichment of advanced robotics applications. Further to an extensive update, fifteen new chapters have been introduced on emerging topics, and a new generation of authors have joined the handbook's team. A novel addition to the second edition is a comprehensive collection of multimedia references to more than 700 videos, which bring valuable insight into the contents. The videos can be viewed directly augmented into the text with a smartphone or tablet using a unique and specially designed app. Springer Handbook of Robotics Multimedia Extension Portal: <http://handbookofrobotics.org/> With stories that entertain as much as they inform, renowned evolutionist David Sloan Wilson outlines the basic principles of evolution and shows how, when properly understood, they can illuminate the

length and breadth of creation, from the origin of life to the nature of religion. What is the biological reason for gossip? For laughter? For the creation of art? Why do dogs have curly tails? What can microbes tell us about morality? These and many other questions are tackled by Wilson in this witty and groundbreaking new book. Now everyone can move beyond the sterile debates about creationism and intelligent design to share Darwin's panoramic view of animal and human life, seamlessly connected to each other. Evolution, as Wilson explains, is not just about dinosaurs and human origins, but about why all species behave as they do—from beetles that devour their own young, to bees that function as a collective brain, to dogs that are smarter in some respects than our closest ape relatives. And basic evolutionary principles are also the foundation for humanity's capacity for symbolic thought, culture, and morality. In example after example, Wilson sheds new light on Darwin's grand theory and how it can be applied to daily life. By turns thoughtful, provocative, and daringly funny, Evolution for Everyone addresses some of the deepest philosophical and social issues of this or any age. In helping us come to a deeper understanding of human beings and our place in the world, it might also help us to improve that world. The book focuses on original approaches intended to support the development of biologically inspired cognitive architectures. It bridges together different

*disciplines, from classical artificial intelligence to linguistics, from neuro- and social sciences to design and creativity, among others. The chapters, based on contributions presented at the Tenth Annual Meeting of the BICA Society, held in on August 15-18, 2019, in Seattle, WA, USA, discuss emerging methods, theories and ideas towards the realization of general-purpose humanlike artificial intelligence or fostering a better understanding of the ways the human mind works. All in all, the book provides engineers, mathematicians, psychologists, computer scientists and other experts with a timely snapshot of recent research and a source of inspiration for future developments in the broadly intended areas of artificial intelligence and biological inspiration. This completely updated volume presents the effective and practical tools you need to design great desktop applications, Web 2.0 sites, and mobile devices. You'll learn the principles of good product behavior and gain an understanding of Cooper's Goal-Directed Design method, which involves everything from conducting user research to defining your product using personas and scenarios. Ultimately, you'll acquire the knowledge to design the best possible digital products and services. Tools and algorithms for analyzing images
The Ultimate Guide to Do-It-Yourself Animatronics
How Darwin's Theory Can Change the Way We Think About Our Lives*

Proceedings of the Tenth Annual Meeting of the BICA Society

Biologically Inspired Cognitive Architectures 2019

Clean Mama's Guide to a Peaceful Home

The Guide to Robotic Vacuum Cleaners conveys product information about the eight leading robotic vacuum cleaners. "Robotic Mapping and Exploration" is an important contribution in the area of simultaneous localization and mapping (SLAM) for autonomous robots, which has been receiving a great deal of attention by the research community in the latest few years. The contents are focused on the autonomous mapping learning problem. Solutions include uncertainty-driven exploration, active loop closing, coordination of multiple robots, learning and incorporating background knowledge, and dealing with dynamic environments. Results are accompanied by a rich set of experiments, revealing a promising outlook toward the application to a wide range of mobile robots and field settings, such as search and rescue, transportation tasks, or automated vacuum cleaning.