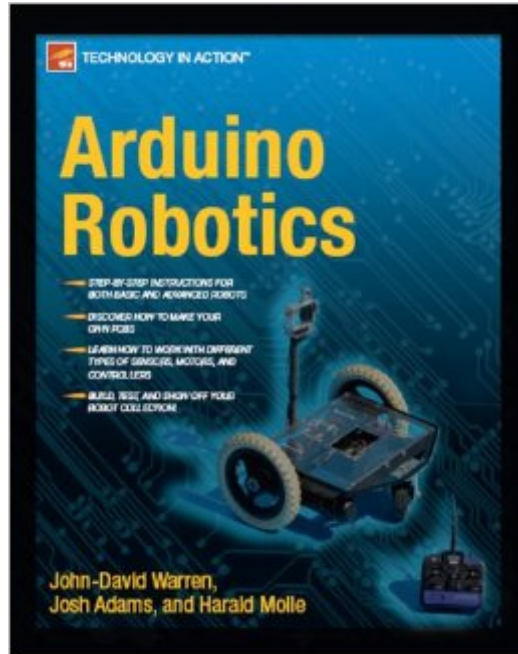The book was found

Arduino Robotics (Technology In Action)

Synopsis

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. What you’ll learn Basics of motor-control Basics of PCB design and fabrication R/C control and decoding Autonomous sensor guidance Frame building from various materials Instructions for a variety of robot designs Who this book is forElectronics and robotics hobbyists and DIY builders.

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Customer Reviews

It was an interesting read. The three hobbyists go through the robotic designs that they made on the cheap using old scavenged parts. They did an amazing job simplifying concepts to the point anybody with a high school education can understand them. Most of the book is devoted not to the Arduino but to the mechanical engineering parts of making a robot on the cheap. Diverse topics like cutting polystyrene and making homemade PCB's take up most of the book with the Arduino part mostly being a brief description of what the code does. I would recommend the book, but there are things that might annoy some people. It doesn't have much of an in-depth look at the Arudino itself. For their more complicated robots where non-library custom code is needed you will see comments like "If you want to understand this, you must read the Data Sheet of atmega168." These guys seem to own a hardware store of tools and have a warehouse of parts lying around. The use of old scavenged parts is cool, but it does mean you shouldn't expect to be able to reproduce anything exactly like these guys did and expect acquiring parts/tools to be a challenge in and of itself. Also keep in mind that this is a hobbyist book and many of the techniques discussed would fail most design for manufacturability and reliability criterion. It will give you ideas on going about making your own hobby robots on the cheap but don't expect your pooling solder connections to withstand the test of time or be easy to debug when things don't work the first time.

This is a cracker of a book and an essential cornerstone for anyone who has recently started tinkering with robotics, or is thinking of doing so. It goes way beyond the title to cover a multitude of disciplines required to undertake and complete the projects in the book, and in the process imparts valuable knowledge to the reader.The authors have used a solid foundation to describe the basic electric and electronic theory in a simple and straight forward way, making the book both easy to read and understand. The electronics world has many pitfalls where duplicate terminology abounds and the authors have clearly described these situations which certainly would help a novice understand the ambiguity created when terms like negative, ground, sink, VSS and cathode all refer to the same thing. The visual depiction of both electronic component symbols and actual components makes this book an invaluable reference.The versatility of the Arduino becomes evident when the reader sees how easily the Arduino interfaces with each of the projects. The Arduino is programmed via an Integrated Development Environment using code sketches which describe the operational steps the Arduino will execute at the robotic level. The basic variables, functions and procedures of the coding language are described along with sketch examples.A refreshing aspect to this book is how the authors have used parts from obsolete or broken

equipment for the robotic sensors and drive mechanisms as opposed to sourcing expensive, new parts and components for the construction of the projects.The hands-on nature of the bot projects show numerous photographs of the bots during their construction, providing the reader with a lot more than just a plain old diagram or blueprint.A worthy book.

If all this excellent book did was to provide careful, graduated instruction in robotics and the necessary Arduino skills to complete thetransition from a line-following or wall hugging robot to advanced projects like a workhorse lawnbot and a do-it yourself Segway-clone it would be worth many times the cover price. But, with practical well-illustrated instruction it also provides the physical computing enthusiast with the background they need in sensors and actuators (like accelerometers, H-Bridge Motor Controllers and Arduino Interfacing of DC Servo and Stepper Motors) to complete many advanced projects of all kinds with the Arduino and a variety of embedded processors. Addtional Hackerspace skills such as use of a Dremel Tool, PCB layout with Eagle Cad and homebrew PCB construction round out the skills to complete a wide variety of Electronic and Mechatronic projects.So, whether your aim is to build personal robotic projects in the Hackerspace, or in K-12 STEM Education and you wish to use the Open Sourceeasy to implement Arduino Platform, or you need a range of hardware, software and workshop skills to complete your own dream project this book is an excellent and necessary part of your library.--Ira Laefsky, MSE/MBATechnology Researcher, Consultant & Hackerspace Participant at Philly's Hive 76

This book covers a broad range of topics and dives deep in some odd specific areas. It provides a good background in general areas and then focused on some very specific robotic projects. It's very light on Arduino detail and heavy on fabrication (mechanical and electrical).Editing seems sloppy. I was unimpressed with the organization of the book and the table of contents are incorrectly aligned with the text.

"Arduino Robotics" is meant for an advanced audience. While the first three chapters do provided a review/intro to electronics, arduino and hardware, there is too much to absorb if you weren't at least familiar with it at one point.For building advanced projects, it is very good. There are detailed instructions, a parts list, schematic and picture of the board. I like that there was an emphasis on safety. I also like how they explained in detail how to physically build things.Normally, I criticize a book for having pages of code in a row. In this case, the code was commented so it wasn't bad. And in chapter 11, where the code was even more involved, the author did break it up with additional

explanation.This book was written by three authors and it is one of the books that you can tell was assembled that way. For example on page 28, I found the long comments hard to follow because they wrap lines while later in the book that problem goes away. Some code examples have a background to highlight being code and others do not. In one place there are 5 levels of if statements (presumably to avoid the && operator) and in others the code is written "normally." The authors do write in first person so "I" changes identify but makes it easier to connect with the project creator.Overall, I was happy with the book. The written by committee wasn't too distracting. And the projects/review area great.---Disclosure: I received a copy of this book from the publisher in exchange for writing this review on behalf of CodeRanch.

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