Raspberry Pi Home Automation with Arduino - Second Edition

Andrew K. Dennis
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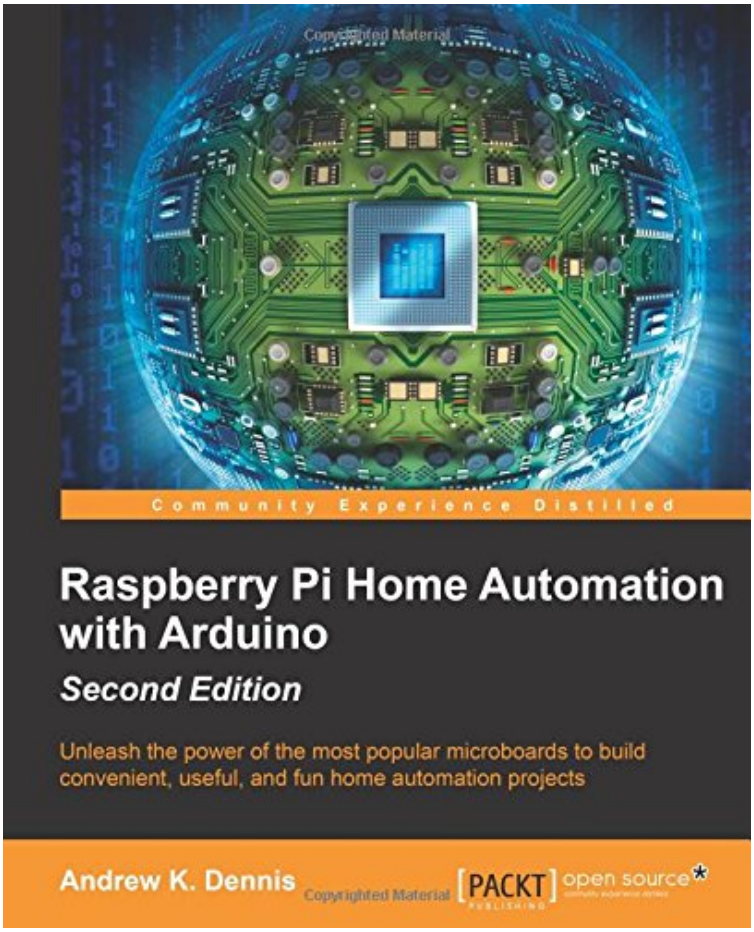

#1521911 in Books 2015-02-27 2015-02-25Original language:EnglishPDF # 1 9.25 x .34 x 7.50l, .59 #File Name: 1784399205136 pages | File size: 46.Mb

Andrew K. Dennis : Raspberry Pi Home Automation with Arduino - Second Edition before purchasing it in order to gage whether or not it would be worth my time, and all praised Raspberry Pi Home Automation with Arduino - Second Edition:

3 of 3 people found the following review helpful. Great improvement on the first editionBy nhevilwenchRaspberry Pi Home Automation with Arduino Second edition is an updated version of the original book.I purchased the original a while back when it was one of the few books tackling the subject and worked through the projects, so was interested to see what the new edition contained. I have both the paperback and Kindle edition. I found it easier to read the Kindle edition on a monitor while working with the Arduino IDE. It's also a lot cheaper.Unlike the first edition we are also introduced to using the Arduino Uno. I found this to be a really great addition as truly provides a guide to using an Arduino Microcontroller with the RPI.As with the 1st edition is one of Packt's shorter format books (approx. 150 pages) geared towards beginners.Like the original, the book starts off with an introduction to Home Automation to give you a flavor of what can be done.Following this in Chapter 2. we learn how to setup our Pi, Arduino and connection bridge. Compared to the first edition, this chapter is far more concise and points the reader in the direction

of locations where they can get apps like NOOBs to speed up the install process. Also removed from this chapter was the information on Berryboot, which I had used originally to setup my Pi.Chapter 3. guides the reader through setting up a thermostat that can interact with an HVAC system and finishes up with creating some code that outputs the temperature data. This acts as a lead in for Chapter 4. We are also given some ideas on how to expand the device using other components such as a potentiometer.In Chapter 4. we setup our Raspberry Pi to pull data from the Arduino and store it into an SQLite DB. The setup of the Raspberry Pi is the start of building a central device that the Arduino projects in the book will interact with.Following this we install HTSQL (as with the first edition) in order to be able to query the temperature data from a web browser. This is a nice touch and I am glad they included it in the second edition.Chapter 5 combines some of the techniques from Chapters 3 and 4 in order to build a parcel detection device using an Arduino that communicates with the Raspberry Pi. The end of the chapter also provides a guide to hooking in the device to using some of the parcel delivery services APIs for providing a better view of what has been delivered.Following this in Chapter 6 we learn how to build a curtain control device using the Raspberry Pi and Cooking Hacks bridge shield. This chapter was particularly useful for me as I have a number of Raspberry Pi's.Based upon the chapters so far I was able to build out a thermostat and parcel delivery device using a couple of Uno boards and cheap components. However in this chapter I also got to re-use a PI from my cluster and the Cooking Hacks shield I purchased with the first edition.On finishing the chapter I now had a small network of 2 Arduino's and 2 RPI's, with one acting as the central "brain" of the system.Chapter 7 contained some projects that were not in the original edition. Here we learn how to build our a damp and water detection device, that can communicate with the RPI.By the end of chapter 7 I had a pretty neat little system working.Chapter 8 like the first edition was a wrapping up chapter with ideas for other projects to expand the system.Conclusion:This was a great improvement over the first edition. It had more projects in and some updates to the originals. I would recommend purchasing this over the first edition as it also contains updates to the code to work with the new version of the arduPi library.Pros:1. Great projects2. Working "system" by the end of the book3. Great for re-using existing components, both RPI and Arduino if you have them4. Simple to follow5. Lots of ideas in each chapter for expanding the systemCons1. Paperback edition is expensive2. More chapters would be nice5 of 6 people found the following review helpful. Put the cost of this book into more components and find some free tutorials elsewareBy AdamThis book is junk. Save your money and watch youtube. This is nothing more than a collection of tutorials on driving a motor and reading a sensor with Arduino. And just so we can say we used a Raspberry PI in the book, we'll use it to query the Arduino to get the reading from its sensor. There are only a handful of very basic projects with minimal real application. The author does not look at integrating with any of the major existing home automation frameworks nor does he even attempt to develop his own.The title of this book encompasses material that could fill thousands of pages. We could be monitoring and graphing power usage of the home and analyzing the data based on time of day, time of year and outside temperatures. We could be creating touch screen interfaces with Raspberry Pi's to act as control consoles throughout the house. We could be discussing random operation of power outlets and light switches to simulate someone being home and deterring burglars.But instead, the book wastes pages on the history of the devices and basic setup like installing Raspian on the Pi and downloading the Arduino IDE. Really? because there aren't already a million other books and free tutorials that cover this.This book is just trying to ride the popularity wave of these devices and adds absolutely no value to a market that is already over saturated with this material.0 of 1 people found the following review helpful. Needs updateBy TW ClarkGetting dated since the Raspberry PI 2B is out and is the only model anyone should consider.

Unleash the power of the most popular microboards to build convenient, useful, and fun home automation projects About This BookRevolutionize the way you automate your home by combining the power of the Raspberry Pi and ArduinoBuild simple yet awesome home automated projects using an Arduino and the Raspberry PiLearn how to dynamically adjust your living environment with detailed step-by-step examplesWho This Book Is ForIf you are new to the Raspberry Pi, the Arduino, or home automation and wish to develop some amazing projects using these tools, then this book is for you. Any experience in using the Raspberry Pi would be an added advantage.What You Will Learn Set up the Raspberry Pi and the Cooking Hacks Arduino bridge shield Work with electronic components to build small circuits Develop applications that interact with your circuits Use thermistors, FSRs, and photoresistors to monitor and control your surroundings Communicate with your Raspberry Pi from an Arduino Uno via Ethernet Send yourself e-mail updates when a parcel arrives at your home Control your own mains power with a relay shield and even connect a motor to your Raspberry Pi Build a device that checks for damp/flooding using the Arduino bridge shield and Raspberry Pi In DetailRevolutionize the way you interact with your home and become part of the rapidly growing group of hobbyists and enthusiasts by combining the powerful Raspberry Pi with an Arduino board.Starting with an introduction to the Raspberry Pi and Arduino boards you will set up your very own home automation system through a series of exciting projects, making your life a lot easier.Build a thermostat, a Raspberry Pi control device, a parcel delivery detector, and a water and damp detector, and then move on to more complex projects including a motor mechanism to control your curtains.By the end of this practical guide, you will be a confident user who can program, set up, and run a wide range of applications using both the Raspberry Pi and the Arduino.

About the AuthorAndrew K. Dennis Andrew K. Dennis is the manager of professional services software development at Prometheus Research. This company is a leading provider of integrated data management for research, and is the home of HTSQL, an open source navigational query language for RDBMS. Andrew has a diploma in computing and a BS in software engineering. He is currently studying for a second BS in creative computing. He has over 10 years of experience in the software industry in the UK, Canada, and USA. His experience includes Python and JavaScript development, e-learning, CMS and LMS development, SCORM consultancy, web development in a variety of languages, open source application development, and a blog dedicated to maker culture and home automation. His interests include web development, e-learning, 3D printing, Linux, the Raspberry Pi and Arduino, open source projects, parallel computing, home automation, amateur electronics, home networking, and software engineering. Many of these topics were covered in his previous book, Raspberry Pi Super Cluster, Packt Publishing.