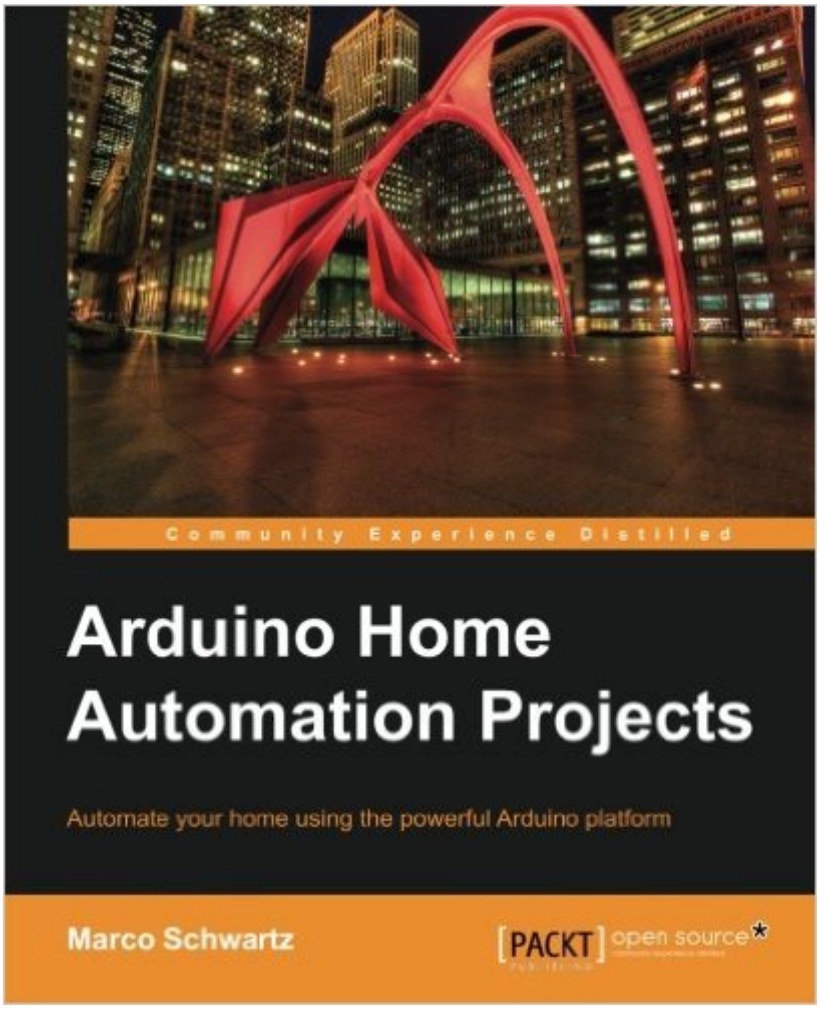
Arduino Home Automation Projects : Automate Your Home Using The Powerful Arduino Platform (Community Experience Distilled)



Synopsis

Automate your home using the powerful Arduino platformAbout This Book Interface home automation components with Arduino Automate your projects to communicate wirelessly using XBee, Bluetooth and WiFi Build seven exciting, instruction-based home automation projects with Arduino in no time Who This Book Is ForIf you want to build your own home automation systems wirelessly using the Arduino platform, this is the book for you. You will need to have some basic experience in Arduino and general programming languages, such as C and C++ to understand the projects in this book.What You Will Learn Connect home automation sensors to the Arduino platform Use the XBee technology to build low-power wireless motion sensors Interface a relay with Arduino to control devices in your home Utilize Wi-Fi to control a lamp remotely Employ Bluetooth and Arduino to measure the temperature remotely Send energy consumption data to the cloud Hack an existing home automation device using Arduino In DetailThe Arduino platform is used by more than one million people around the world to prototype electronic systems. It is the perfect platform to use to build home automation systems, as it allows you to build your own motion sensors, control lamps remotely, and control preexisting home automation devices. The Arduino platform also allows you to build wireless home automation systems using well-known technologies such as Bluetooth and Wi-Fi. This book shows you how to use the Arduino tiny microboard to live like a king. The book covers several projects you can perform using the Arduino platform. The first few projects comprise the basics of home automation, such as building a wireless motion sensor, controlling a lamp remotely, and building a Bluetooth temperature sensor. Then, this book dives into the Internet of Things, helping you get a clear understanding of how to send measured data to the cloud. The book will wrap up by showing you how to communicate and control an existing device and build your own home automation system.

Book Information

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Customer Reviews

This book should be considered as an overview of different technologies that can interface with the Arduino in order to accomplish a variety of home automation tasks. It should be read as a practical survey of available options.Each chapter of this book presents an example using an Arduino connected to a sensor or an actuator with some kind of wireless communication interface such as XBee, CC3000, and Bluetooth. Many components from these examples can be found through various online tutorials but in an individualized way.What this book does well is to tie in together these various tutorials. As different techniques and technologies are presented, a deeper study of each project allows the reader to swap techniques between projects. Each technology presented in Arduino Home Automation Project should therefore be considered with a modular approach. This is especially true with respect to the wireless communication interfaces proposed in the book. One could easily reshuffle parts from one chapter to another. For example, chapter 3 describes how to communicate the temperature read by a DHT sensor using a Bluetooth; this same reading could also be transmitted using an XBee interface, as described in chapter 1, or a through a CC3000 interface, as described in chapter 2. Resourceful readers can thus adapt the different experiments without necessarily needing to purchase all the hardware used in this book.In addition, different programmable computer interfaces are introduced, whether as GUI or as web server: PHP, Python. Again, it is possible to adapt shift things around between projects.

Although this is only a slim volume (106 ’real’ pages, plus the isual preamble, index, etc.) and contains only seven, project-based chapters, Marco Schwartz has managed to achieve the a ’Tardis book’ effect â “ it’s bigger on the inside than it is on the outside.The chapters cover Wireless Xbee Motion Detectors, Controlling Lights with a Phone or Tablet, Temperature Measurement using Bluetooth, Xively Weather Station in the Cloud, Monitoring Energy Consumption in the Cloud, Hacking Commercial Home Automation Devices and the final Build Your OWN Home Automation System â “ which includes a breadboard Arduino, a brief introduction to Eagle CAD and even 3D

printing a case for the project.What this book covers provides the reader with the information to ’adopt and adapt’ the designs and the ’build and test in blocks’ approach that the author adviocates, is the escence of practical engineering.This is, without a doubt, the best book I’ve seen for those who want to take their first steps into the world of home automation and provides enough information to extend any of the projects to suit indiidual needs and requirements â “ it’s also bang up to date (Xively rather than Pachube is a good clue!).It will not cover every possible scenario and those wanting to run a wired network will be disappointed, but for a viable, easily understood introduction to home automation and as a way to achieving the first steps, this book takes some beating...

It’s a sad truth that home automation is a branch of technology totally fragmented, in which "proprietary" solutions fight each other to produce countless incompatible systems. This does a disservice to the sector itself and to most users that would like to do in their homes what they already do on their phones, computers and in their cars. So Marco Schwartz’s vision of a free home automation running with Arduino in its heart is a hopeful vision.The author gives us in the book "Arduino Home Automation Projects" a walk through different projects with an increasing level of complexity and a very didactic way. In it a number of solutions to typical automation systems from a broad spectrum of communication protocols all accessible to the Arduino platform are shown.From the beginning the reader will find that the book is focused to guide their work and invites the â œgeekâ • user at all times to develop each project. But what is really remarkable is the way in which the author pinpoints the projects and the consequences that underlie these projects, showing the reader the strength of the Arduino platform as an investment in the future for all "hobbyist" in the world of home automation.If you are a hobbyist and fancy home automation with Arduino, do not hesitate to engage in this required reading.

I was very disappointed with this book. It has a number of very simple projects that don’t add up to home automation in a significant way. It does not show how to integrate with more comprehensive home automation systems. Most of the content of the book is freely available ala Google...

I admit that Arduino is a cool thing for those who are just getting into the embedded world, but Iâ ™m not a very big fan of it. I like to do stuff on a low level way, interacting with the CPU registers and writing everything in plain C, but that of course is just my problem :) Anyway, the book is cool, clearly understandable even for a beginner, has lots of images and drawings. Every chapter deals

with a different kind of home automation problem and solves it by using some kind of wireless transmission. It even covers designing a custom PCB using Eagle.

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