The Internet of Things (IoT) is a global network that links physical objects using Cloud computing, web applications, and network communications. It allows devices to communicate with each other, access information on the Internet, store and retrieve data, and interact with users, creating smart, pervasive and always-connected environments. Despite the Internet of Things being a relatively new concept, there are already a few open platforms available that enable remote and seamless management and visualization of sensor data: Cosm, Nimbits, and ThingSpeak are just a few examples. And Arduino works with all of them. The Arduino is an incredibly flexible micro-controller and development environment that cannot only be used to control devices, but can also be used to read data from all kinds of sensors. Its simplicity and extensibility, in addition to its great success and adoption by users, has led to the development of a variety of hardware extensions and software libraries that enable wired and wireless communication with the Internet. Arduino is the ideal open hardware platform for experimenting with the world of the Internet of Things. Make your Arduino talk to the world! This book will provide you with all the information you need to design and create your own Internet of Things (IoT) applications using the Arduino platform. More specifically, you will learn: About the Internet of Things and Cloud Computing concepts About open platforms that allow you to store your sensor data on the Cloud (like Cosm, Nimbits and many more) The basic usage of Arduino environment for creating your own embedded projects at low cost How to connect your Arduino with your Android phone and send data over the Internet How to connect your Arduino directly to the Internet and talk to the Cloud How to reprogram your Arduino microcontroller remotely through the Cloud Detailed Table of Contents can be found at: http://www.buildinginternetofthings.com Updated version (v1.1): Contains corrections, improvements and updates about IoT Platforms!

**Book Information**

Paperback: 352 pages
Publisher: CreateSpace Independent Publishing Platform (April 2, 2012)
Language: English
ISBN-10: 1470023431
Product Dimensions: 6 x 0.8 x 9 inches
Shipping Weight: 1.3 pounds (View shipping rates and policies)
Average Customer Review: 4.0 out of 5 stars Â· See all reviews (20 customer reviews)
This excellent guide by a skilled practitioner introduces the Arduino, or Microcontroller Enthusiast to a new range of applications, where sensor data coming from the home, the environment, or health and fitness appliances can be shared and analyzed by remote applications on the Web or through Web Services and Cloud-based Applications. This introduces the Microcontroller Hobbyist and Professionals to the new world of "The Internet of Things". Dr. Doukas is an expert in Microcontrollers, Health Information Technology, Electronics, Bioengineering and Data Analytics as well as so-called Cloud Computing. He provides careful introduction in separate chapters on use of Sensors and Actuators, Microcontrollers, emphasizing the Open Source Arduino, the range and capabilities of Cloud/Web Services for Sensor Data Storage and Analysis. For performing the more advanced projects in the second half of the book some exposure to electronics, programming the Arduino in C and Java Applications is recommended, but these can be easily learned from the sources recommended in the book and an extensive supporting website (search Google for Building Internet of Things) or look at the book's pointer. This is an excellent introduction to two of the most important technologies in the Maker's and Engineer's toolkit Using Microcontrollers for Sensor and Communication Applications, and the emerging Internet of Things (perhaps the single most important technology advance of the decade). In addition to the excellent resources provided by this book, the author's website provides downloads of all code, necessary external libraries and magnified full color illustrations. The author is a rising talent in the world of hobbyists and practicing engineers. I heartily recommend this book.

As other reviewers have said, there are quite a few typos and minor errors in this book. BUT... the breadth of topics discussed, which include implementing sensors, connecting with cloud servers, interfacing with an Android device, is impressive. The author also covers a variety of solutions for different tasks and not just one or two personal favorites, as too many authors do. I will agree with other posters that a lot of these projects are not for beginners. For example, to complete some of the projects the reader is expected to have some experience developing in Java and for Android devices. The author maintains a website where all the source code presented in the book is
available, as well as color versions of the illustrations. What the site really needs is a section for errata. And about the typos and technical errors... It's obvious from looking at the book itself that this is a self-published title. No publisher information appears anywhere in the book, and the work's copyright is wholly the author's. He thanks CreateSpace in the Acknowledgements and on his website. Looking into CreateSpace a little more has taught me it is 's self-publishing service. In other words, this book was written and released without the benefit of technical reviewers and editors that other technical titles published via more traditional means would have received. So, in that sense, this book is an impressive achievement from a sole producer that could have really used a read-through by other technically competent people before release. One of the book's biggest flaws is the lack of an index. Really, any kind of technical title needs a good index, and this has none.

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