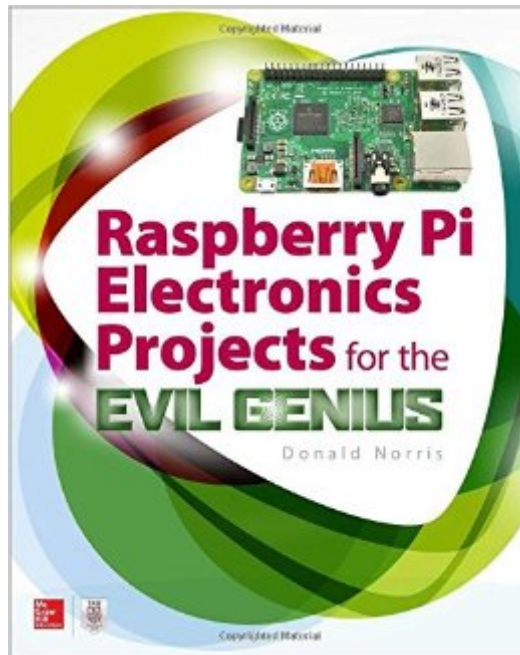# Raspberry Pi Electronics Projects For The Evil Genius (Tab)

Synopsis

Program your own MicroPython projects with easeâ •no prior programming experience necessary! This DIY guide provides a practical introduction to microcontroller programming with MicroPython. Written by an experienced electronics hobbyist, Python for Microcontrollers: Getting Started with MicroPython features eight start-to-finish projects with clear, easy-to-follow instructions for each. You will learn how to use sensors, store data, control motors and other devices, and work with expansion boards. From there, youâ ™ll discover how to design, build, and program all kinds of entertaining and practical projects of your own.â ¢Â Learn MicroPython and object-oriented programming basicsâ ¢Â Interface with a PC and load files, programs, and modules â ¢Â Work with the LEDs, timers, and convertersâ ¢Â Control external devices using serial interfaces and PWMâ ¢Â Build and program a let ball detector using the three-axis accelerometerâ ¢Â Install and program LCD and touch-sensor expansion boardsâ ¢Â Record and play sounds using the AMP audio board

Book Information

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Customer Reviews

I have the Raspberry Pi Projects for the Evil Genius which provided lots of fun projects for the Raspberry Pi enthusiasts. TheRaspberry Pi Electronics Projects for the Evil Genius book provides a number of new and more advanced (and more fun) projects in comparison. Note that these projects are not for the beginners type as they require some advanced skills in building, software

programming, and debugging.The projects are well written with clear illustrations from the concept to the actual build, programming, and applications. The chapters also provide a list of build components including the models numbers and places to acquire the parts.Here is a list of projects covered in the book :- Raspi Touchscreens- Interfacing with Arduino Coprocessor- RGB LED Matrix display- Raspberry Pi clusters operations- RasPi-to-RasPi communications using MQTT- Software defined radio- BrickPi Python robot using the LEGO EV3 Mindstorm kit- Python controlled robotic arm- Gigapixel camera system- Nighttime Garden monitorThese projects will provide in-depth learning experience with the Raspberry Pi and many hours of fun.

This book offers a very wide array of interesting projects to do with your Raspberry Pi. It's a good sampling where at least one project is bound to tickle your fancy; each project touches a different domain.While it requires some knowledge of coding and computers, I am really impressed with the density of information the author has managed to pack; he's also avoiding a "do as I say" approach, but gives you the various options, their benefits and drawbacks, and how to proceed. From the beginner to the expert, everyone is bound to learn something. In my opinion a tinkering 12 year old will be over the moon with this book, but as a professional programmer who's been juggling with Unix since the 1980s, I still found much to learn, and best of I never found it boring. I particularly liked the writing style: it's friendly and familiar, but also accurate and concise.Some minor criticism: the book would have benefitted from a companion web site with downloadable source code, and links to suppliers for the accessories.I think the best way to learn a new computer language or a new computer environment is to start a project, but sometimes it's hard to get project ideas when one is not familiar with the possibilities of the platform. This book acts as a perfect guide and is a wonderful helper, also saving you lots of time getting started. Very highly recommended.

I got a little confused when I ordered this; it's not a second edition, it's a Volume 2. So yeah, you should probably keep that in mind up front.There's quite a bit of interesting material in here, and it's mostly a step above the usual Pi project book material. The supercomputer... okay, that's pretty old school, relatively speaking. So is software-defined radio. However, the gigapixel camera system (really more of a panoramic setup) is an excellent demonstration of how to use a RPi with a (Canon) camera. I actually hadn't heard of the Message Queueing Telemetry Transport protocol before, but Norris explains it well and puts it to excellent use to construct a thermostat. And although I'm sure many people have used Arduino and RPi together, Norris combines the two with a pair of Xbee transceivers to build a simple remote Lidar device. And also there's Legos (ie using a Pi as a

replacement for a Mindstorms EV3 brick to operate a robot arm).In general, Norris delivers. You don't need to be an expert to use these projects, but they're still pretty sophisticated, the sorts of things you'd see on advanced DIY shows like Ben Heck, Hak5 or TWiT.tv's Know How. It's definitely worth reading, especially if you already have Norris' first Evil Genius book.

Since I'm basing this review on a pre-release version of the book, I've ignored typos and minor glitches.Raspberry Pi Electronics projects for the Evil Genius is a great book. Not only does the author present interesting projects, he also does a very good explaining the principles behind the technologies involved.My two favorites are the Software Defined Radio project and the Supercomputer project. Both are complex subjects, but you're given a lot of good information before you begin and you've built something useful.While the SDR project is fairly inexpensive to complete, some of the others like the supercomputer project and the Lidar project cost a bit more to implement. I'm still sourcing the materials for the Lidar project and I made a scaled down version of the Supercomputer since I only had 4 Raspberry Pi's on hand. One can take what they've learned building their R-Pi supercomputer and implement it using a few spare Linux computers.I don't think I would recommend this as a book for rank beginners, but if you're comfortable with a soldering iron and computers, this book should provide many hours of informative fun.

It is the nature of a book like this that it soon becomes dated, so let's get this out of the way â " the book is dated. It discusses hardware through the Raspberry Pi 2, and assumes a somewhat dated version of the Raspbian operating system. That said, I didn't notice anywhere in the text where the improvements from the Pi2 to the Pi3 would have mattered. The book has 11 chapters, ten of which describe projects involving the Pi and some peripheral. There is nothing "evil geniusy" about it, this is a fairly straightforward series of tutorials, covering topics such as LCD matrices and robotic arms. For the most part, the hardware involved can be bought from places like Adafruit that offer fairly detailed instructions for installation and use, and you might reasonably ask what value this book provides. Donald Norris does a good job of putting each bit of hardware in context, explaining how they work and enabling you to work with variations on the recommended kit and otherwise expand your skills and flexibility.The book assumes familiarity with Python and the ability to solder.

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