

Build An Esp8266 Mobile Robot Adafruit Industries

Unleash Your Inner Engineer: A Journey into the Enchanting World of the ESP8266 Mobile Robot

Prepare to be utterly captivated! Adafruit Industries has truly outdone themselves with "Build An ESP8266 Mobile Robot." This isn't just a technical manual; it's an invitation to a world brimming with ingenuity and the sheer joy of creation. From the moment you crack open its pages, you'll be transported to an imaginative realm where circuits hum with life and code blossoms into dynamic motion. It's a delightful blend of the practical and the fantastical, a rare gem that sparks both the intellect and the imagination.

What truly sets this book apart is its remarkable emotional depth. While the technical instructions are crystal clear and meticulously laid out, the authors weave in a narrative thread that speaks to the universal human desire to build, to understand, and to bring our ideas to life. You'll find yourself invested not just in the success of your robot, but in the journey of creation itself. There's a palpable sense of accomplishment and wonder that permeates every chapter, making the learning process feel less like a chore and more like a magical exploration. It's the kind of book that can make a grown professional feel like a wide-eyed child again, rediscovering the thrill of hands-on discovery.

The appeal of "Build An ESP8266 Mobile Robot" is astonishingly broad, transcending age and experience. Whether you're a seasoned developer looking for a fun new project, a curious student eager to dip your toes into the world of electronics, or simply someone who marvels at the possibilities of technology, this book has something profound to offer. The clear, step-by-step approach ensures that even complete beginners can confidently navigate the complexities, while experienced makers will appreciate the elegant solutions and opportunities for customization. It's a wonderfully inclusive adventure, fostering a sense of community and shared excitement around the fascinating world of robotics.

Prepare for some chuckles along the way! The humorous undertones and encouraging tone make even the most challenging steps feel approachable and even fun. You might find yourself grinning as you troubleshoot a stray wire or cheering as your creation finally whirs to life. It's this lightheartedness, coupled with Adafruit's signature expertise, that makes learning an absolute delight. Seriously, who knew debugging could be this entertaining? This book proves that learning doesn't have to be dry; it can be an exciting, engaging, and even funny endeavor.

This book is a testament to the power of accessible technology education. It demystifies complex concepts, presenting them in a way that is both understandable and inspiring. The imaginative setting, the emotional resonance, and the sheer fun of building your own ESP8266 mobile robot make this an experience you won't soon forget. It's more than just a project; it's a gateway to a world of possibilities, a stepping stone to countless future innovations.

Our Heartfelt Recommendation: "Build An ESP8266 Mobile Robot" is, without a doubt, a timeless classic that deserves a prominent place on every tech enthusiast's bookshelf. Its enduring impact lies in its ability to inspire, to educate, and to foster a genuine love for making. It captures hearts worldwide because it taps into that fundamental human drive to create and to explore. If you're looking for a book that will not only teach you valuable skills but also ignite your passion and leave you with a profound sense of accomplishment, look no further. This is an experience that will stay with you long after you've powered down your last circuit.

A Strong Recommendation for Lasting Impact: We wholeheartedly recommend "Build An ESP8266 Mobile Robot" by Adafruit Industries. This book's lasting impact is undeniable, empowering a new generation of creators and innovators. It's a must-have for anyone seeking to understand the magic behind intelligent machines and to experience the thrill of bringing their own ideas to life. Don't miss out on this extraordinary journey!

Futuristic Trends in Networks and Computing Technologies PEMBELAJARAN INTERNET OF THINGS DENGAN MODUL TRAINER ESP-32 Hybrid Intelligent Systems IoT and Analytics in Renewable Energy Systems (Volume 2) Cognitive Infocommunications, Theory and Applications Wi-fi Controlled FPV Rover Robot (with Arduino and ESP8266) ESP8266 Robotics Projects ESP8266 Robotics Projects Cookbook For Mobile Robotic Platform Control ESP8266 Home Automation Projects Mobile Robotics With Arduino Internet of Things with ESP8266 A DIY Smart Home Guide: Tools for Automating Your Home Monitoring and Security Using Arduino, ESP8266, and Android ROS int - Integration of a mobile robot in ROS architecture Esp8266 Internet of Things Cookbook ESP8266 NodeMCU Using Arduino IDE (Internet of Things) Zero to Hero: ESP8266 Building Smart Drones with ESP8266 and Arduino ESP8266 Internet of Things Cookbook ESP8266: Programming NodeMCU Using Arduino IDE - Get Started with ESP8266 Pradeep Kumar Singh I Gede Susrama Mas Diyasa Anu Bajaj O. V. Gnana Swathika Ryszard Klempous Mehmet AVCU Pradeeka Seneviratne Pradeeka Seneviratne Gehlot Dr. Anita Catalin Batrinu Klaus Rbenack Marco Schwartz Robert Chin André Gonçalves Araújo Marco Schwartz Jacob kale Manoj R. Thakur Syed Omar Faruk Towaha Marco Schwartz UpSkill Learning Futuristic Trends in Networks and Computing Technologies PEMBELAJARAN INTERNET OF THINGS DENGAN MODUL TRAINER ESP-32 Hybrid Intelligent Systems IoT and Analytics in Renewable Energy Systems (Volume 2) Cognitive Infocommunications, Theory and Applications Wi-fi Controlled FPV Rover Robot (with Arduino and ESP8266) ESP8266 Robotics Projects ESP8266 Robotics Projects Cookbook For Mobile Robotic Platform Control ESP8266 Home Automation Projects Mobile Robotics With Arduino Internet of Things with ESP8266 A DIY Smart Home Guide: Tools for Automating Your Home Monitoring and Security Using Arduino, ESP8266, and Android ROS int - Integration of a mobile robot in ROS architecture Esp8266 Internet of Things Cookbook ESP8266 NodeMCU Using Arduino IDE (Internet of

Things) Zero to Hero: ESP8266 Building Smart Drones with ESP8266 and Arduino ESP8266 Internet of Things Cookbook
ESP8266: Programming NodeMCU Using Arduino IDE - Get Started with ESP8266 *Pradeep Kumar Singh I Gede Susrama*
Mas Diyasa Anu Bajaj O. V. Gnana Swathika Ryszard Klempous Mehmet AVCU Pradeeka Seneviratne Pradeeka
Seneviratne Gehlot Dr. Anita Catalin Batrinu Klaus Rbenack Marco Schwartz Robert Chin André Gonçalves Araújo Marco
Schwartz Jacob kale Manoj R. Thakur Syed Omar Faruk Towaha Marco Schwartz UpSkill Learning

this book constitutes the refereed proceedings of the second international conference on futuristic trends in network and communication technologies fnct 2019 held in chandigarh india in november 2019 the 49 revised full papers and 6 short papers presented were carefully reviewed and selected from 226 submissions the prime aim of the conference is to invite researchers from different domains of network and communication technologies to a single platform to showcase their research ideas the selected papers are organized in topical sections on network and computing technologies wireless networks and internet of things iot futuristic computing technologies communication technologies security and privacy

dalam era digital yang terus berkembang internet of things iot menjadi bagian integral dari transformasi teknologi buku ini berjudul pembelajaran internet of things dengan modul trainer esp 32 membuka pintu bagi para pembaca untuk memahami konsep dan praktik penerapan iot menggunakan modul pelatihan esp 32 yang inovatif buku ini dirancang sebagai panduan komprehensif yang menyajikan langkah langkah praktis untuk memahami dasar dasar iot dan membangun proyek proyek yang menarik dengan menggunakan modul esp 32 para penulisnya yang ahli di bidangnya menggabungkan teori dan praktik secara harmonis memastikan pembaca dapat memahami konsep secara mendalam dan sekaligus merasakan pengalaman langsung dalam menerapkannya buku ini bukan hanya menyajikan informasi teknis tetapi juga memberikan inspirasi untuk mengembangkan ide ide kreatif dan solusi inovatif menggunakan teknologi iot dengan bahasa yang jelas dan contoh yang mudah dipahami pembaca dari berbagai latar belakang teknologi dapat dengan mudah mengikuti langkah langkah pembelajaran yang diajarkan apakah anda seorang mahasiswa teknik pengembang perangkat lunak atau hobiis teknologi pembelajaran internet of things dengan modul trainer esp 32 adalah panduan yang sempurna untuk mengembangkan keterampilan anda dalam memahami merancang dan mengimplementasikan solusi iot yang praktis dan inovatif

this book presents 48 selected papers focused on machine learning based solutions from the 23rd international conference on hybrid intelligent systems which was held in five different cities namely olten switzerland porto portugal kaunas lithuania greater noida india kochi india and in online mode the 23rd international conference on hybrid intelligent systems his 2023 was focusing on synergistic combinations of multiple approaches to develop the next generation of intelligent systems his 2023 had contributions by authors from 44 countries this book offers a valuable reference guide for all industrial specialists scientists academicians researchers students and practitioners in the field of machine learning and industrial applications

smart cities emanate from a smart renewable energy aided power grid the smart grid technologies offer an array of benefits like reliability availability and resiliency smart grids phenomenally contribute to facilitating cities reaching those sustainability goals over time digital technologies such as the internet of things iot automation artificial intelligence ai and

machine learning ml significantly contribute to the two way communication between utilities and customers in smart cities five salient features of this book are as follows smart grid to the smart customer intelligent computing for smart grid applications novel designs of iot systems such as smart healthcare smart transportation smart home smart agriculture smart manufacturing smart grid smart education smart government smart traffic management systems innovations in using iot and ai in improving resilience of smart energy infrastructure challenges and future research directions of smart city applications

the book gathers the chapters of cognitive infocommunication research relevant to a variety of application areas including data visualization emotion expression brain computer interfaces or speech technologies it provides an overview of the kind of cognitive capabilities that are being analyzed and developed based on this common ground it may become possible to see new opportunities for synergy among disciplines that were heretofore viewed as being separate cognitive infocommunication begins by modeling human cognitive states and aptitudes in order to better understand what the user of a system is capable of comprehending and doing the patterns of exploration and the specific tools that are described can certainly be of interest and of great relevance for all researchers who focus on modeling human states and aptitudes this innovative research area provides answers to the latest challenges in influence of cognitive states and aptitudes in order to facilitate learning or generally improve performance in certain cognitive tasks such as decision making some capabilities are purely human while others are purely artificial but in general this distinction is rarely clear cut therefore when discussing new human cognitive capabilities the technological background which makes them possible cannot be neglected and indeed often plays a central role this book highlights the synergy between various fields that are perfectly fit under the umbrella of coginfocom and contribute to understanding and developing new human artificial intelligence hybrid capabilities these merged capabilities are currently appearing and the importance of the role they play in everyday life are unique to the cognitive entity generation that is currently growing up

wi fi controlled fpv rover robot with arduino and esp8266

build simple yet amazing robotics projects using esp8266 about this book get familiar with esp8266 and its features build wi fi controlled robots using esp8266 a project based book that will use the esp8266 board and some of its popular variations to build robots who this book is for this book is targeted at enthusiasts who are interested in developing low cost robotics projects using esp8266 a basic knowledge of programming will be useful but everything you need to know is covered in the book what you will learn build a basic robot with the original esp8266 arduino uno and a motor driver board make a mini round robot with esp8266 huzzah modify your mini round robot by integrating encoders with motors use the zumo chassis kit to build a line following robot by connecting line sensors control your romi robot with wiimote build a mini robot rover chassis with a gripper and control it through wi fi make a robot that can take pictures in detail the esp8266 wi fi module is a self contained soc with an integrated tcp ip protocol stack and can give any microcontroller access to your wi fi network it has a powerful processing and storage capability and also supports application hosting and wi fi networking this book is all about robotics projects based on the original esp8266 microcontroller board and some variants of esp8266 boards it starts by showing all the necessary things that you need to build your development environment with basic hardware and software

components the book uses the original esp8266 board and some variants such as the adafruit huzzah esp8266 and the adafruit feather huzzah esp8266 you will learn how to use different type of chassis kits motors motor drivers power supplies distribution boards sensors and actuators to build robotics projects that can be controlled via wi fi in addition you will learn how to use line sensors the arduicam wii remote wheel encoders and the gripper kit to build more specialized robots by the end of this book you will have built a wi fi control robot using esp8266 style and approach a project based guide that will help you build exciting robotics using esp8266

build simple yet amazing robotics projects using esp8266 about this book get familiar with esp8266 and its features build wi fi controlled robots using esp8266 a project based book that will use the esp8266 board and some of its popular variations to build robots who this book is for this book is targeted at enthusiasts who are interested in developing low cost robotics projects using esp8266 a basic knowledge of programming will be useful but everything you need to know is covered in the book what you will learn build a basic robot with the original esp8266 arduino uno and a motor driver board make a mini round robot with esp8266 huzzah modify your mini round robot by integrating encoders with motors use the zumo chassis kit to build a line following robot by connecting line sensors control your romi robot with wiimote build a mini robot rover chassis with a gripper and control it through wi fi make a robot that can take pictures in detail the esp8266 wi fi module is a self contained soc with an integrated tcp ip protocol stack and can give any microcontroller access to your wi fi network it has a powerful processing and storage capability and also supports application hosting and wi fi networking this book is all about robotics projects based on the original esp8266 microcontroller board and some variants of esp8266 boards it starts by showing all the necessary things that you need to build your development environment with basic hardware and software components the book uses the original esp8266 board and some variants such as the adafruit huzzah esp8266 and the adafruit feather huzzah esp8266 you will learn how to use different type of chassis kits motors motor drivers power supplies distribution boards sensors and actuators to build robotics projects that can be controlled via wi fi in addition you will learn how to use line sensors the arduicam wii remote wheel encoders and the gripper kit to build more specialized robots by the end of this book you will have built a wi fi control robot using esp8266 style and approach a project based guide that will help you build exciting robotics using esp8266

controlling robots using blynk virtuino cayenne thingspeak firebase key features the book provides gradual pace of basics to advanced interfacing and programming with ti launch pad for iot applications it provides a unique style for iot applications with program codes it discusses various applications where the internet of things plays an important role and considers a number of different independent prototypes for various mobile robotics platform control methods the control of robot with different mobile apps like blynk virtuino cayenne thingspeak firebase are included for vast coverage of scope step by step programming to get started with ti launch pad case studies to provide solution to real time problems the case studies and programming in book are tested on real hardware during handling the industrial and student projects description this book provides a platform to the readers where they can understand the applications of internet of things to control the robotic platform it covers the basic knowledge of the mobile apps with their designing steps and programming the objective of the

book is to discuss various applications of robotic platform where internet of things can play an important role this book comprises of total seventeen chapters for designing different independent prototypes for the various control methods it covers introduction to iot and basic components to design a robotic platform the system demonstration is done with the help of ti launch pad and other interfacing devices the control of robot with different mobile apps like blynk virtuino cayenne thingspeak firebase are included for vast coverage of scope it would be beneficial for the people who want to get started with hardware based robotic prototypes with iot this book is entirely based on the practical experience of the authors while undergoing projects with the students and industries what will you learn interfacing of ti launch pad and nodemcu with input output devices serial communication between ti launch pad and nodemcu robot control using the blynk virtuino app environment monitoring robot with blynk app sensory data acquisition robot using a thingspeak server robot control with cayenne app local server and nodemcu firebase server who this book is for students pursuing be bsc me msc btech mtech in computer science electronics electrical table of contents1 introduction2 components of a robotic platform3 interfacing of ti launch pad with input output devices4 interfacing of nodemcu with input output devices5 serial communication between ti launch pad and nodemcu6 robot control using the blynk app7 robot control using the virtuino app8 environment monitoring robot with blynk app9 sensory data acquisition robot using a thingspeak server 10 robot control with cayenne app11 robot control with local server and nodemcu12 robot control with a firebase server13 xbee and wi fi modem based robot control14 fire fighting robot15 the internet of things robotic arm16 the smart orchard with a robotic arm sprinkler17 smart farming with the iot about the authordr anita gehlot is currently associated with lovely professional university as associate professor with more than ten years of experience in academics she has twenty patents in her account she has published more than fifty research papers in referred journals and conference she has organized a number of workshops summer internships and expert lectures for students she has been invited as session chair keynote speaker to international national conferences and faculty development program dr rajesh singh is currently associated with lovely professional university as professor with more than fifteen years of experience in academics he has been awarded as gold medalist in m tech and honors in his b e his area of expertise includes embedded systems robotics wireless sensor networks and internet of things he has organized and conducted a number of workshops summer internships and expert lectures for students as well as faculty he has twenty three patents in his account he has published around hundred research papers in referred journals conferences his linkedin profile linkedin com in dr rajesh singh 6380845ahis website orcid org 0000 0002 3164 8905 dr lovi raj gupta is the executive dean faculty of technology sciences lovely professional university he is a leading light in the field of technical and higher education in the country his research focused approach and an insightful innovative intervention of technology in education have won him much accolades and laurels in 2001 he was appointed as assistant controller technology ministry of it govt of india by the honorable president of india in the office of the controller of certifying authorities cca in 2013 he was accorded the role in the national advisory board for what can i give mission kalam foundation of dr apj abdul kalam in 2011 he received the mit technology review grand challenge award followed by the coveted infosys infymakers award in the year 2016 he has ten patents to his account his linkedin profile linkedin com in lovraj bhupendra singh is managing director of schematics microelectronics and provides product design and r d support to industries and universities he has completed bca pgdca m sc cs m tech and has more than eleven years of experience in the field of computer networking and embedded

systems he has published twelve books in the area of embedded systems and internet of things his blog schematicslab blogspot in his linkedin profile linkedin com in bhupisir

unleash the power of the esp8266 and build a complete home automation system with its key features harness the power of the esp8266 wi fi chip to build an effective home automation system learn about the various esp8266 modules configuring the esp8266 and making interesting home automation projects a step by step guide on the esp8266 chip and how to convert your home into a smart home book description the esp8266 is a low cost yet powerful wi fi chip that is becoming more popular at an alarming rate and people have adopted it to create interesting projects with this book you will learn to create and program home automation projects using the esp8266 wi fi chip you will learn how to build a thermostat to measure and adjust the temperature accordingly and how to build a security system using the esp8266 furthermore you will design a complete home automation system from sensor to your own cloud you will touch base on data monitoring controlling appliances and security aspects by the end of the book you will understand how to completely control and monitor your home from the cloud and from a mobile application you will be familiar with the capabilities of the esp8266 and will have successfully designed a complete ready to sell home automated system what you will learn get compile install and configure an mqtt server use the wi fi connectivity feature to control appliances remotely control several home appliances using the esp8266 wi fi chip control and monitor your home from the cloud using esp8266 modules stream real time data from the esp8266 to a server over websockets create an android mobile application for your project who this book is for this book is targeted at people who want to build connected and inexpensive home automation projects using the esp8266 wi fi chip and to completely automate their homes a basic understanding of the board would be an added advantage

the book describes the design and programming of mobile robots the arduino platform which is easy to use was chosen to control the robot the author describes the wiring and programming of typical components such as motors lcd modules and various sensors up to the operation of an infrared remote control or a radio remote control in contrast to ready to use robot kits the reader is also given the necessary freedom to implement and shape his own ideas this book is intended for readers who already have some experience with microcontrollers in general or the arduino platform in particular in addition basic knowledge of electronics and the ability to create simple programs in c or c++ are expected

build amazing internet of things projects using the esp8266 wi fi chip key features get to know the powerful and low cost esp8266 and build interesting projects in the field of internet of things configure your esp8266 to the cloud and explore the networkable modules that will be utilized in the iot projects this step by step guide teaches you the basics of iot with esp8266 and makes your life easier book description the internet of things iot is the network of objects such as physical things embedded with electronics software sensors and connectivity enabling data exchange esp8266 is a low cost wifi microcontroller chip that has the ability to empower iot and helps the exchange of information among various connected objects esp8266 consists of networkable microcontroller modules and with this low cost chip iot is booming kick starting with an introduction to the esp8266 chip we will demonstrate how to build a simple led using the esp8266 you will then learn how to read send and monitor data from the cloud next you'll see how to control your devices remotely from anywhere in the

world furthermore you'll get to know how to use the esp8266 to interact with web services such as twitter and facebook in order to make several esp8266s interact and exchange data without the need for human intervention you will be introduced to the concept of machine to machine communication the latter part of the book focuses more on projects including a door lock controlled from the cloud building a physical bitcoin ticker and doing wireless gardening with this book you will be able to create and program internet of things projects using the esp8266 wifi chip what you will learn control various devices from the cloud interact with web services such as twitter or facebook make two esp8266 boards communicate with each other via the cloud send notifications to users of the esp8266 via email text message or push notifications build a physical device that indicates the current price of bitcoin build a simple home automation system that can be controlled from the cloud create your own cloud platform to control esp8266 devices who this book is for this book is for those who want to build powerful and inexpensive iot projects using the esp8266 wifi chip including those who are new to iot or those who already have experience with other platforms such as arduino

publisher's note products purchased from third party sellers are not guaranteed by the publisher for quality authenticity or access to any online entitlements included with the product design and build custom devices that work through your phone to control your home remotely setting up a smart home can be costly intimidating and invasive this hands on guide presents you with an accessible and cheap way to do it yourself using free software that will enable your home and your mobile devices to communicate a diy smart home guide tools for automating your home monitoring and security using arduino esp8266 and android contains step by step plans for easy to build projects that work through your phone to control your home environment remotely all the projects in the book are geared towards helping you create a smart home with fun and useful examples such as wireless temperature and humidity monitors automated lights sensors that can trigger alarms in the event of broken glass fire window entry or water heater leakage and much more all projects can be accomplished with no previous knowledge for those with some background in c c or java the projects can be customized all projects use easy free flexible open source platforms such as arduino focuses projects on real world remote control activations for protecting the home written by a smart home expert and experienced author

the goal of this work is to provide hardware abstraction and intuitive operation modes to decrease the development and implementation time of robotic platforms thus allowing researchers to focus in their main scientific research motivations e.g. search and rescue multi robot surveillance swarm robotics among others to that end this work presents the development of a compact mobile low cost robotic platform denoted as traxbot developed and assembled at the institute of systems and robotics isr which has been fully integrated in the well known robot operating system ros framework furthermore several available mobile robots are compared and discussed in terms of their physical dimensions hardware sensors communication abilities motion maximum run time and special features this provides support to the reader on the decision making acquisition process of a cost effective robotic platform beyond the survey's results the robotic system assembly with a full description of its components as well as detailed information about the microcontroller programming development and testing are also presented the potentialities of the traxbot are described which combined with the herein presented ros driver provide

several tools for data analysis and easiness of interaction between multiple robots sensors and teleoperation devices in order to validate the approach several experimental tests were conducted using both real and mixed teams of real and virtual robots

this book is all about getting started with internet of things using nodemcu it's a development kit made out of esp8266 which is very cheap wi fi microcontroller and in this book you can find how to program the nodemcu from arduino ide you will learn in depth details about esp8266 chip modules features benefits this book will help you understand the basic concepts of iot its benefits advantages and applications in various industries starting from home automation to healthcare monitoring to industrial transformation what are you still waiting for go ahead and enjoy the iot ride with nodemcu this book will teach you programming nodemcu using arduino ide if you want to learn about the world of iot and how it changes the world we live in this is a resource book to get started with table of content 1 introduction to arduino2 basics of electronics3 arduino development kit4 arduino component 1 led 2 temperature 3 push button 4 potentiometer 5 servo motor 6 dc motor 5 nodemcu on arduino ide 1 analog input 2 analog output 3 serial monitor 4 switching using transistor 5 i2c scanner 6 piezo buzzer 7 7 segment display 8 rgb led 9 weather station 10 connecting to internet 11 led control from server 12 getting mac address

super book for becoming super hero in internet of things world it takes you from zero to become master in esp8266 programming using arduino ide iot is recent trend in market you can built anything with help of this book covers from basics to advance level includes getting data to vb net drawing graphs using google gadgets to show gauges hardware design aspects and much more

leverage the wifi chip to build exciting quadcopters key features learn to create a fully functional drone with arduino and esp8266 and their modified versions of hardware enhance your drone's functionalities by implementing smart features a project based guide that will get you developing next level drones to help you monitor a particular area with mobile like devices book description with the use of drones diy projects have taken off programmers are rapidly moving from traditional application programming to developing exciting multi utility projects this book will teach you to build industry level drones with arduino and esp8266 and their modified versions of hardware with this book you will explore techniques for leveraging the tiny wifi chip to enhance your drone and control it over a mobile phone this book will start with teaching you how to solve problems while building your own wifi controlled arduino based drone you will also learn how to build a quadcopter and a mission critical drone moving on you will learn how to build a prototype drone that will be given a mission to complete which it will do it itself you will also learn to build various exciting projects such as gliding and racing drones by the end of this book you will learn how to maintain and troubleshoot your drone by the end of this book you will have learned to build drones using esp8266 and arduino and leverage their functionalities to the fullest what you will learn includes a number of projects that utilize different esp8266 and arduino capabilities while interfacing with external hardware covers electrical engineering and programming concepts interfacing with the world through analog and digital sensors communicating with a computer and other devices and internet connectivity control and fly your quadcopter taking into account weather conditions build a drone that can follow the user wherever he she goes build a mission control drone and

learn how to use it effectively maintain your vehicle as much as possible and repair it whenever required who this book is for if you are a programmer or a diy enthusiast and keen to create a fully functional drone with arduino and esp8266 then this book is for you basic skills in electronics and programming would be beneficial this book is not for the beginners as it includes lots of ideas not detailed how you can do that if you are a beginner then you might get lost here the prerequisites of the book include a good knowledge of arduino electronics programming in c or c and lots of interest in creating things out of nothing

exploring the low cost wifi module key features leverage the esp8266 s on board processing and storage capability get hand on experience of working on the esp8266 arduino core and its various libraries a practical and enticing recipe based book that will teach you how to make your environment smart using the esp8266 book descriptionthe esp8266 wi fi module is a self contained system on chip soc with an integrated tcp ip protocol stack and can give any microcontroller access to your wi fi network it is capable of either hosting an application or offloading all wi fi networking functions from another application processor this book contains practical recipes that will help you master all esp8266 functionalities you will start by configuring and customizing the chip in line with your requirements then you will focus on core topics such as on board processing sensors gpios programming networking integration with external components and so on we will also teach you how to leverage arduino using the esp8266 and you ll learn about its libraries file system ota updates and so on the book also provide recipes on web servers testing connecting with the cloud and troubleshooting techniques programming aspects include micropython and how to leverage it to get started with the esp8266 towards the end we will use these concepts and create an interesting project iot by the end of the book readers will be proficient enough to use the esp8266 board efficiently what you will learn measure data from a digital temperature and humidity sensor using the esp8266 explore advanced esp8266 functionalities control devices from anywhere in the world using micropython troubleshoot issues with cloud data monitoring tweet data from the arduino board build a cloud connected power switch with the esp8266 create an esp8266 robot controlled from the cloud who this book is for this book is targeted at iot enthusiasts who are well versed with electronics concepts and have a very basic familiarity with the esp8266 some experience with programming will be an advantage

get started with the internet of things learn how to use the esp8266 wifi chip to build internet of things iot projects this book will teach you programming nodemcu using arduino ide if you want to learn about the world of iot and how it changes the world we live in this is a resource book to get started with you will learn indepth details about esp8266 chip modules features benefits this book will help you understand the basic concepts of iot its benefits advantages and applications in various industries starting from home automation to healthcare monitoring to industrial transformation what you ll learn from this book chapter 1 introduction to programming with nodemcu using arduino ide chapter 2 moving toward a smarter internet the internet of things chapter 3 getting started with esp8266 the chip the modules chapter 4 esp8266 chip modules features understanding iot designing an internet of things solution system application requirements overcoming limitations using esp8266 features of esp8266 chapter 5 understanding nodemcu chapter 6 getting started with nodemcu the 3 ways to program

nodemcu chapter 7 role of esp8266 and nodemcu in iot chapter 8 programming nodemcu hardware requirements software requirements chapter 9 step by step guide to programming nodemcu chapter 10 creating your 1st project chapter 11 creating your 2nd project chapter 12 conclusion sculpting your career in iot how do you become an expert on iot internet of things the internet of things wants you 10 new jobs created by the internet of things using this step by step guide book you will learn the complete details about esp8266 you will understand nodemcu the three different ways to programming nodemcu you will also learn to program nodemcu using arduino ide there are 2 different projects given in this book so you can get started with your own iot projects

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