

# **ELECTRONIC SYSTEMS: THE ROBOT & THE APPS**



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# PREFACE

*In writing this book, we lay down our passion for invention and experience with electronics, robotics, microcontrollers and app developments.*

*We hope you have as much pleasure building and enhancing your robot as we did in developing the techniques contained in this book.*

*Building a robot and enabling it to sense and reacts to its environment is a wonderful way to take one's programming knowledge to the next level.*

*This book introduces a wide range of programming tips, apps development techniques, internet of things and robotics concepts including movement, obstacle detection, handling sensors, remote control, and all kinds of real-world physical computing challenges.*

*It is for people who want to understand how these concepts can be used to build, expand and customize the robot.*



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# Part A

## Programming

### 1.1 Installation Guide

#### Installation Guide

This guide will walk you through installing the Windows driver and Integrated Development Environment (IDE) so that your computer can communicate with your microcontroller.



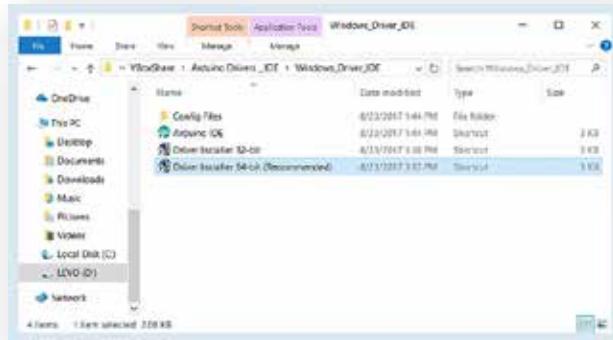
**TIPS:** The software can be downloaded from:-  
<https://www.arduino.cc/en/Main/Software>

1. If you have never used the Arduino IDE before, select the "Arduino IDE and Driver" below. If you already have a working version of the IDE, simply download the Driver.

Unzip ("Extract all") the entire folder. This may take a few minutes.



- The installer you'll want depends on whether you have a 32-bit or 64-bit version of Windows. If you're not sure just chose the "Driver Installer 64-bit (Recommended)".



- \* If you see the following message after running "Driver Installer 64-bit (Recommended)" then you'll need to use "Driver Installer 32-bit".



- You'll be asked if you want to allow the app to make changes to your device. Select 'Yes' to continue.

