

Documentation and Files

The following documentation was written to help run a successful MIYbot class:

- ChassisDesigns.pdf - this document discusses the design of the robot body. It gives ideas on how to build the body plate, the wheels, the castor and how to mount the sensors.
- ElectronicsBuild.pdf - this document gives step by step instructions on how to solder the circuit board that controls the MIYbot
- MIYbotElectronics.pdf - this document describes in detail how the electronics work for the MIYbot.
- MIYbotSoftware.pdf - this document describes how to install and program the Arduino IDE and the MIYbot software on the robot. It also describes the functions of the robot.
- MIYbot Circuit Board BOM - Sheet1.pdf, MIYbotCircuitBoardBOM.xlsx - this spreadsheet includes all the parts and pieces needed to build a MIYbot in a classroom setting. It also includes several other useful tools needed, like soldering irons.
- TeachersGuide.pdf - a guide to running a successful MIYbot robotics class.
- Catalog.pdf - this document
- MIYbot Paper.docx, MIYbot Paper.pdf - Academic paper describing MIYbot

The following files are also included

- MIYbot2.dip, MIYbot2.dch (in folder circuit board) - these files are Diptrace design files for the circuit board. If you need to make changes to the circuit board you can use Diptrace to make the changes. Diptrace also generates the Gerber and Drill files needed to manufacture the circuit board. Diptrace can be downloaded and purchased at www.diptrace.com.
- MIYbot2Gerbers.zip (in folder circuit board)- these are the gerber files needed to have the circuit board manufactured. You can view them with the free program GERBV if you want to take a look.
<http://gerbv.geda-project.org/>
- MIYbot.cpp, MIYbot.h, and MIYbot1.ino, (in MIYbot1 folder) - the actual code to run the MIYbot. See the documentation on MIYbot software for more information
- HC-SR04-bracket.svg (in MiscDesign folder)- Nice laser cut bracket design that can be useful for mounting the HC-SR04 ultrasonic sensors.
- castor.scad and castor*.stl files (in MiscDesign folder)- these are 3D designs for making a castor that uses a large marble. The stl files can be printed on a 3D printer. Use OpenScad to open castor.scad. There are many viewers on-line that can open stl files.