

FollowThrough: User Guide - Revision 0

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March 5, 2017

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SAFETY WARNING



The staff of FollowThrough is not responsible for any injuries sustained during use of the product. Use of the product is at the user's risk.

Basketball is a physically demanding game in which the player(s) may sustain injury. By using our product, the user agrees to renounce all responsibility on the staff of FollowThrough.

FollowThrough is also not responsible for any damaged equipment due to the nature of the game.

This product is meant for people who have at least some understanding of computer related technology and Raspberry Pi related technology.



STEP 1: REGISTRATION

1.1 THINGS TO KNOW

In order to use FollowThrough to its best potential you need to create an account on the web interface (detailed below). This will allow you to send all the data your computer records to the cloud so that you may review the recorded information later. All of the recorded data is contextualised and graphed for your viewing convenience.

1.2 THE WEBSITE

The first step of the signing up process is to open up the web page. Start by opening up your browser of choice. Once it is open enter the url "http://54.145.183.186/" into the url bar (with no quotation marks) and press enter. You will be greeted by a page that looks like the one displayed below:



1.3 STARTING AT HOME

When you arrive at the home page on the website you will notice a few things. Most obviously, the logo is displayed in the middle of the screen. However you will also notice the two buttons on the top left ([1] and [2] in the picture).



1.3.1 What These Buttons Do

[1] is the log-in button. If you have already registered with an account this button is irrelevant to you. However if you have already registered skip to step 2.

[2] is the register button. If you have not already registered for an account this button is the relevant one for you. Press this button to continue registering for an account.

1.4 THE REGISTRATION PAGE

After pressing the register button you will be met with a page that looks like this (except your page will not have labels):

A screenshot of a web page for 'FollowThrough' showing a registration form. The page has an orange header bar with the text 'FollowThrough-'. Below the header, there is a light blue background. In the center, there is a white box titled 'Register'. Inside this box, there are four input fields: 'Name', 'E-Mail Address', 'Password', and 'Confirm Password'. Each input field has a small circle with a number next to it: '1' for Name, '2' for E-Mail Address, '3' for Password, and '4' for Confirm Password. Below these fields is a blue button labeled 'Register' with a small circle with the number '5' next to it.

1.4.1 Steps to Register

Keep in mind that you may press the FollowThrough logo at the top left to return to the home page at any point of this process.

- [1] The first step is entering your first and last name. These are case sensitive.
- [2] The second step is to enter your e-mail address. This has to be a unique e-mail which is not already in the system for security purposes.
- [3] The third step is to choose a password. It is recommended that you choose a password between 6-14 characters, containing at least one capitol letter, one lowercase letter, one number and one symbol. This will ensure that your password is strong.
- [4] Following that you must re-enter the exact password you used before. The two must match otherwise you will not be allowed to continue.
- [5] Finally, press the register button once all the other forms are complete to continue to the website.

The website will automatically log you in after this process and send you to your home page which will look like this:

FollowThrough-
⋮ Djordje Petrovic

Zone 1: 27%

Zone 2: 36%

Zone 3: 87%

Zone 4: 15%

Average Exit Angle: 57.45

Average Entry Angle: 76.23

Average Arc Height: 2.3m

Average Shot Percentage: 50%

Yesterday

Zone	Over / Under	Exit Angle	Entry Angle	Arc Height	Made
1	Under	45.4554	42.3454	49.34	✓
1	Under	45.4554	42.3454	49.34	✓
1	Under	45.4554	42.3454	49.34	✗
1	Under	50.4554	38.3448	45.38	✓
1	Under	45.4554	42.3454	49.34	✓
1	Under	45.4554	42.3454	49.34	✗
1	Under	50.4554	38.3448	45.38	✓
1	Under	45.4554	42.3454	49.34	✓

The contents of this page will be detailed at the end of step two.

STEP 2: LOGGING IN

2.1 KEEP IN MIND

Keep in mind that if you have not already registered for an account you should follow step one before you come to here, as you will need an account to complete this step. This step will cover how to log in to the web interface.

2.2 STARTING OUT

The following section is incredibly similar to the beginnings of step one: The first step of the signing up process is to open up the web page. Start by opening up your browser of choice. Once it is open enter the url "http://54.145.183.186/" into the url bar (with no quotation marks) and press enter. You will be greeted by a page that looks like the one displayed below, but without labels:



2.2.1 What These Buttons Do

[1] is the log-in button. This is the button that it most relevant to you, however if you haven't already registered return to step one.

[2] is the register button. At this point you should have already registered for an account. If this is not the case, return to step one and do so before continuing. If you do in fact already have an account, press this button to continue.

2.3 THE LOG-IN PAGE

After continuing on from the previous section, you will be faced with the following screen (just without labels):

The image shows a login form titled "Login" centered on a light blue background. At the top of the background is an orange bar with the text "FollowThrough". The form itself is a white box containing the following elements: an "Email" label above a text input field (callout 1); a "Password" label above a text input field (callout 2); a checkbox labeled "Remember Me" (callout 4); an orange button labeled "LOGIN" (callout 3); and a link labeled "FORGOT YOUR PASSWORD?" (callout 5).

2.3.1 Steps to Log-in

[1] is the field in which you enter the e-mail you registered with.

[2] is the field in which you enter the password associated with your e-mail. Your password - e-mail pair must match or you will not be allowed in to view your profile.

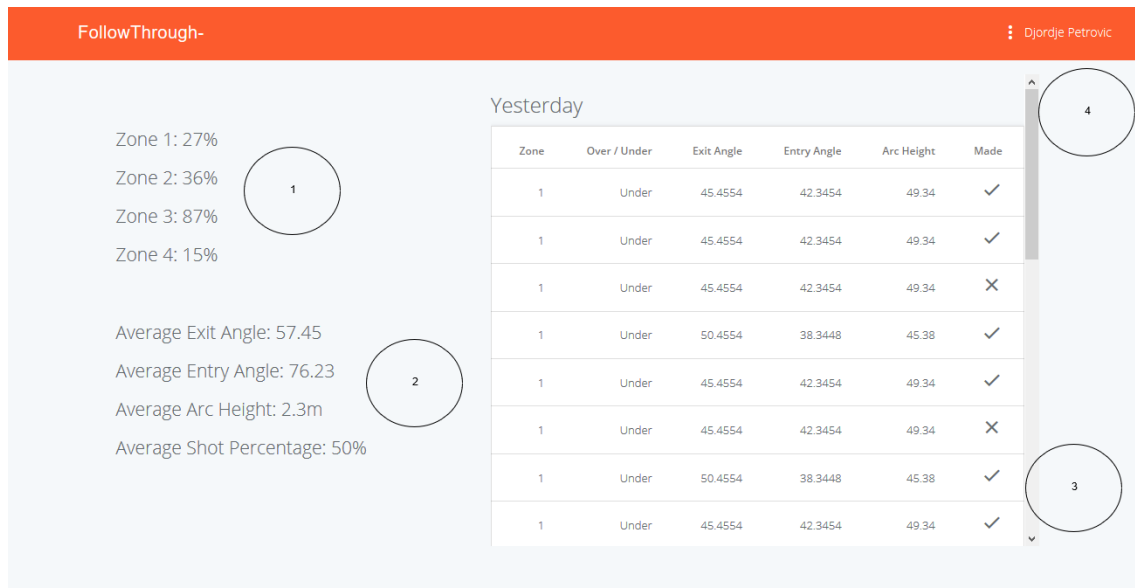
[3] pressing this button will log you in if all of your information checks out. If you want the website to remember your log-in information, optionally check the box labelled with [4].

[4] is the button which you check off if you want the website to log you in automatically.

[5] this button is to be pressed if you cannot remember your password. If that's the case the website will give you detailed instructions as to how to reset your password.

2.4 YOUR DATA

Once you have logged in you will be met with a page that looks like the one shown below (save for the labelling):



2.4.1 What the Page is Saying

Below is a brief description of how to interpret this page:

- [1] this section will detail which zone you take the most shots from when you're on the court.
- [2] this section will detail all of your averages. This includes average exit angle, average entry angle, average arc height and average shot percentage (percentage of shots made).
- [3] this section is a tabular summary of all the data the application has collected for you. All the information pertains to the label at the top of the row.
- [4] you will notice that your name is here. From here you can access personal account settings you can change or review.

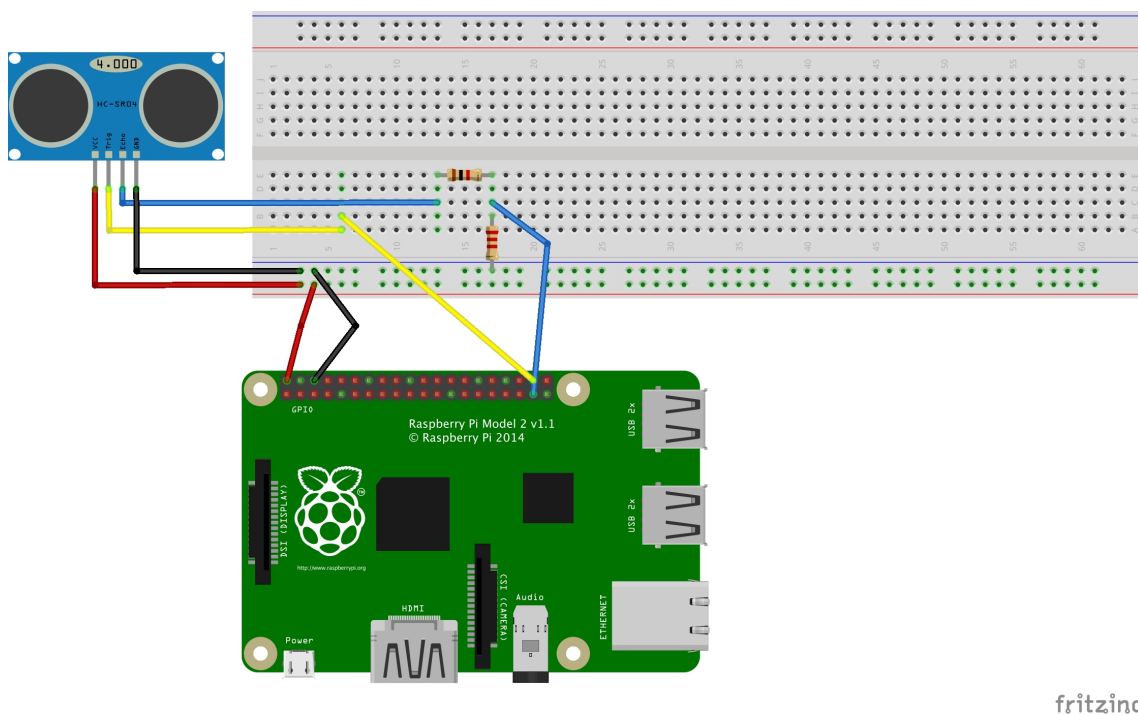
STEP 3: SETTING UP THE PI

3.1 INTRO

Before you can make your way to the court, you have to preemptively set up your Raspberry Pi sensor in order to have the optimal experience with this product.

3.2 SETTING IT UP

Below you will see a diagram of how to put together the sensor:



The Raspberry Pi must have a WiFi connection in order to communicate to your recording device effectively.

STEP 4: ON THE COURT, HARDWARE

4.1 GETTING DOWN TO BUSINESS

In order to successfully complete this step you must have completed step three first. If you have not done that, go back to step three to continue.

4.1.1 *The Camera*

When you arrive on the court, the first step is to set up the camera in the correct way. To do so follow these steps:

- 1) The first step is to ensure you have a secure Internet connection. This will allow the application to communicate to the cloud server and the Raspberry Pi. Without this you will not be able to review your data at a later date.
- 2) The next step is to find a solid, safe and flat surface where you can put the recording device. You want to angle the device so that it can at least the entire half of the court you are playing on. You also want to make sure it is aligned in parallel with the court.
- 3) Once the device has been placed properly, you have to launch the FollowThrough application. The next section will detail how to connect the Pi to the application.

4.1.2 *The Pi*

Before setting up the Pi you should set up the camera properly. If you have not done so refer to the previous section. To set up the Raspberry Pi follow these steps:

- 1) Hook the sensor to the rim on the Basketball net and have the sensor face inwards.
- 2) Power the device on.
- 3) Ensure it is connected to the Internet.
- 4) Return to your computer and pair the devices.

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STEP 5: ON THE COURT, SOFTWARE (UNDER CONSTRUCTION)

5.1 USING THE APPLICATION

In order to successfully use the application you must have completed all the previous steps. If you have not done so, return to those steps and complete them before trying to use the product. The use of the product is quite simple and is outlined below:

- 1) When you open the application it will prompt you for log-in information (to be implemented). Enter the same information you used for step two (or the information you created in step one).
- 2) Once the two devices are paired and you have properly set up the viewing angle, you can get started.
- 3) Press the start recording button in the user interface (still being made) to begin recording.
- 4) Play on the court for as long as you wish. You will receive live feedback as you do.
- 5) When you are done your session return to your device and press the stop recording button (to be implemented) to wrap up the recording process. The application will automatically send your data to the cloud so that you may access it at a later time

If you wish to access your data later on, simply refer to step two for the process involved.

For any additional questions you may e-mail the support staff directly at petrod@mcmaster.ca