
Self-Reporting application for fisheries science



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Preface

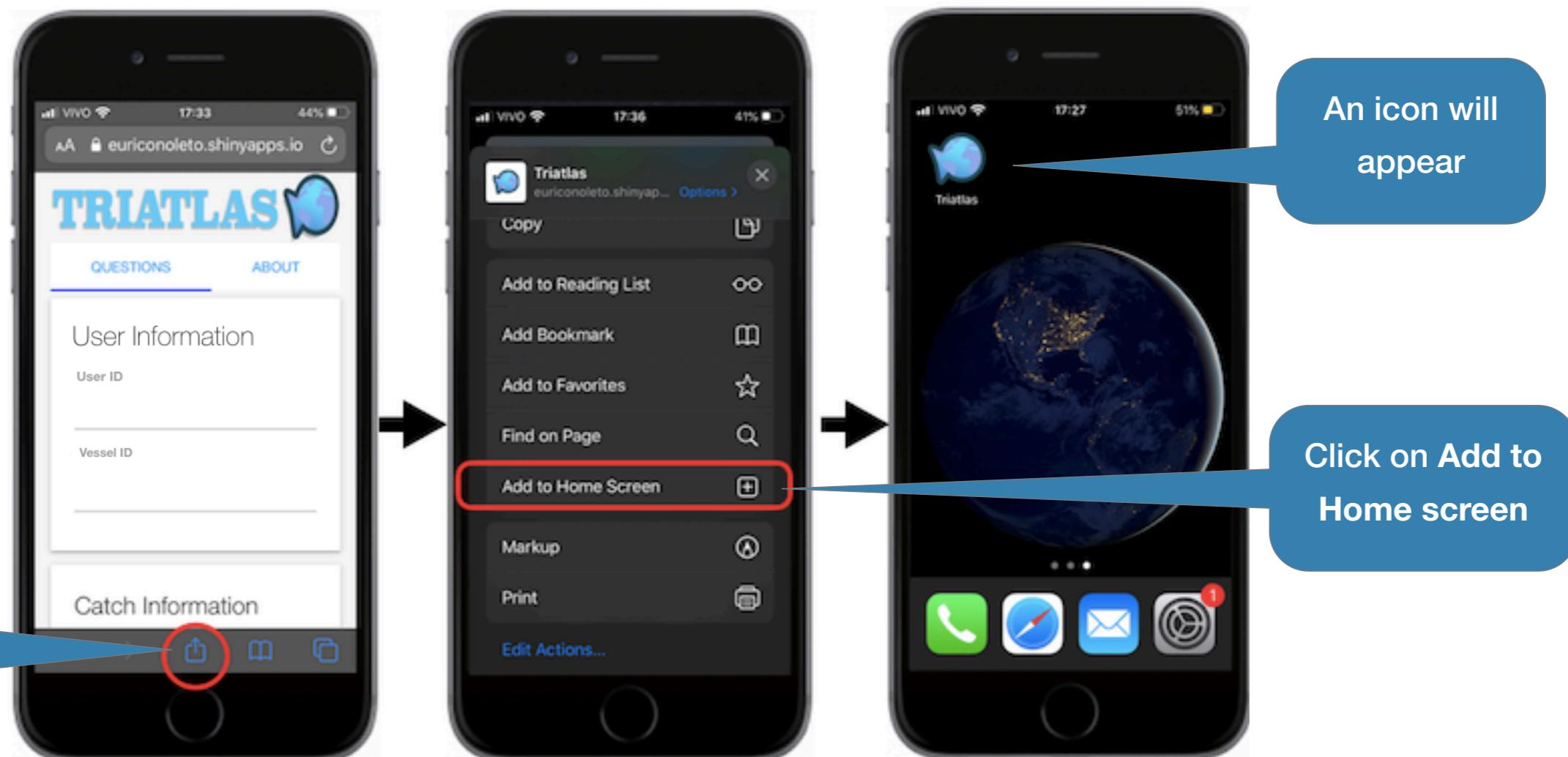
Shiny4SelfReport is an application encoded to provide a tool for self-reporting data in fisheries. It was built to empower users with an easy interface for developing a self-reporting app for fisheries sciences and related fields. The Shiny4SelfReport application can provide a suitable tool to this end in a programming language that is widespread in many scientific disciplines. We hope that our tool will lower the hurdle to the uptake of fisheries data assessment for scientists, policymakers, and other stakeholders. Shiny4SelfReport can be accessed online at <https://triatlas.shinyapps.io/Shiny4SelfReport>. Also, it uses progressive web application (PWA) technology for working as an application in Android and IOS systems.

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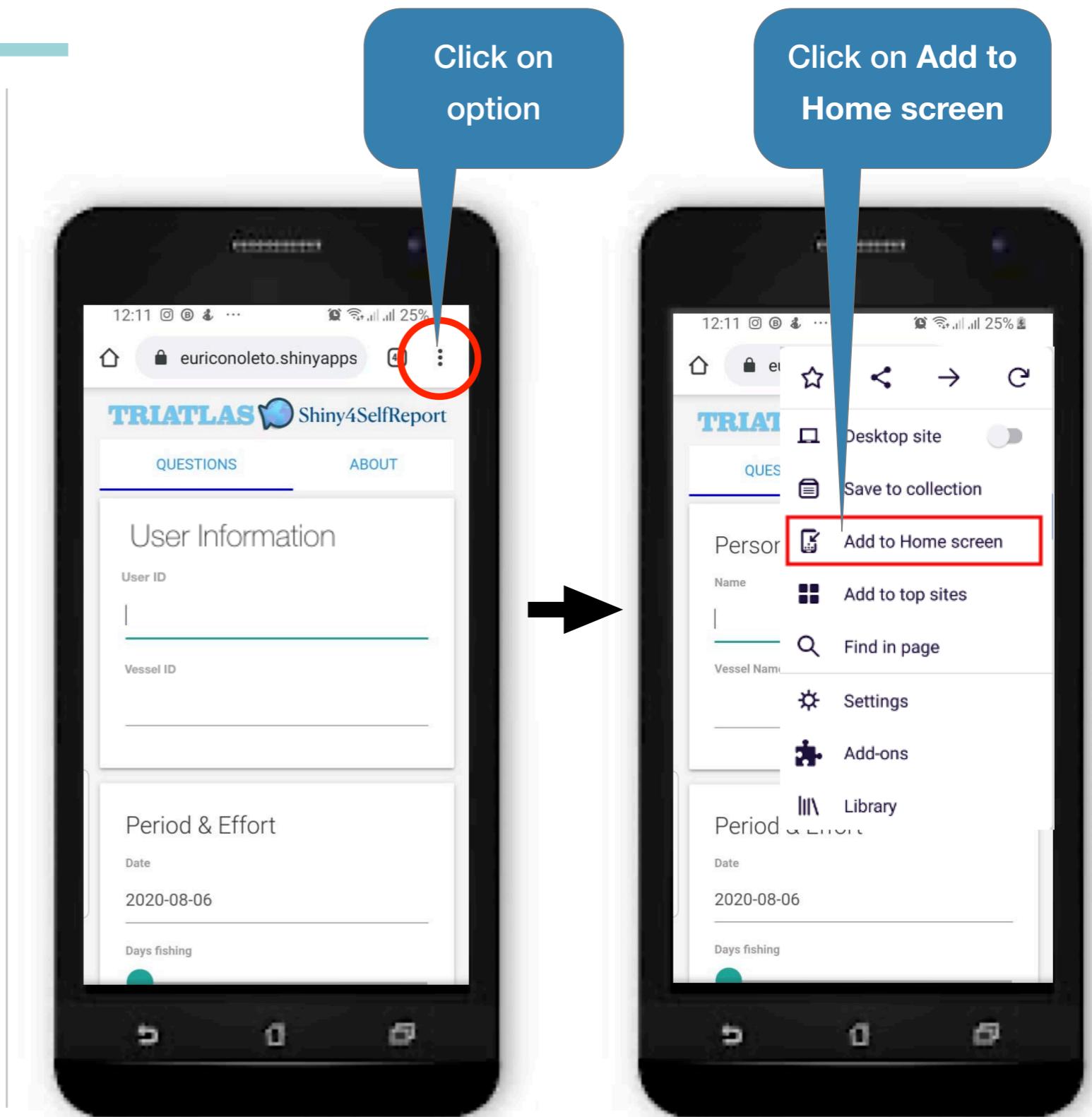
Install

This tool is available as a Progressive Web Application (PWA). For that matter, it works as a native app when the user opens the app link (<https://triatlas.shinyapps.io/shiny4selfreport>) and then selects the **add to Home Screen** option. Subsequently, an icon will appear at the home screen. The PWA technology works in both IOS and Android systems.



Install

For **Android operation system**, the method to install a PWA may vary.
But it is usually similar to IOS.



User Interface

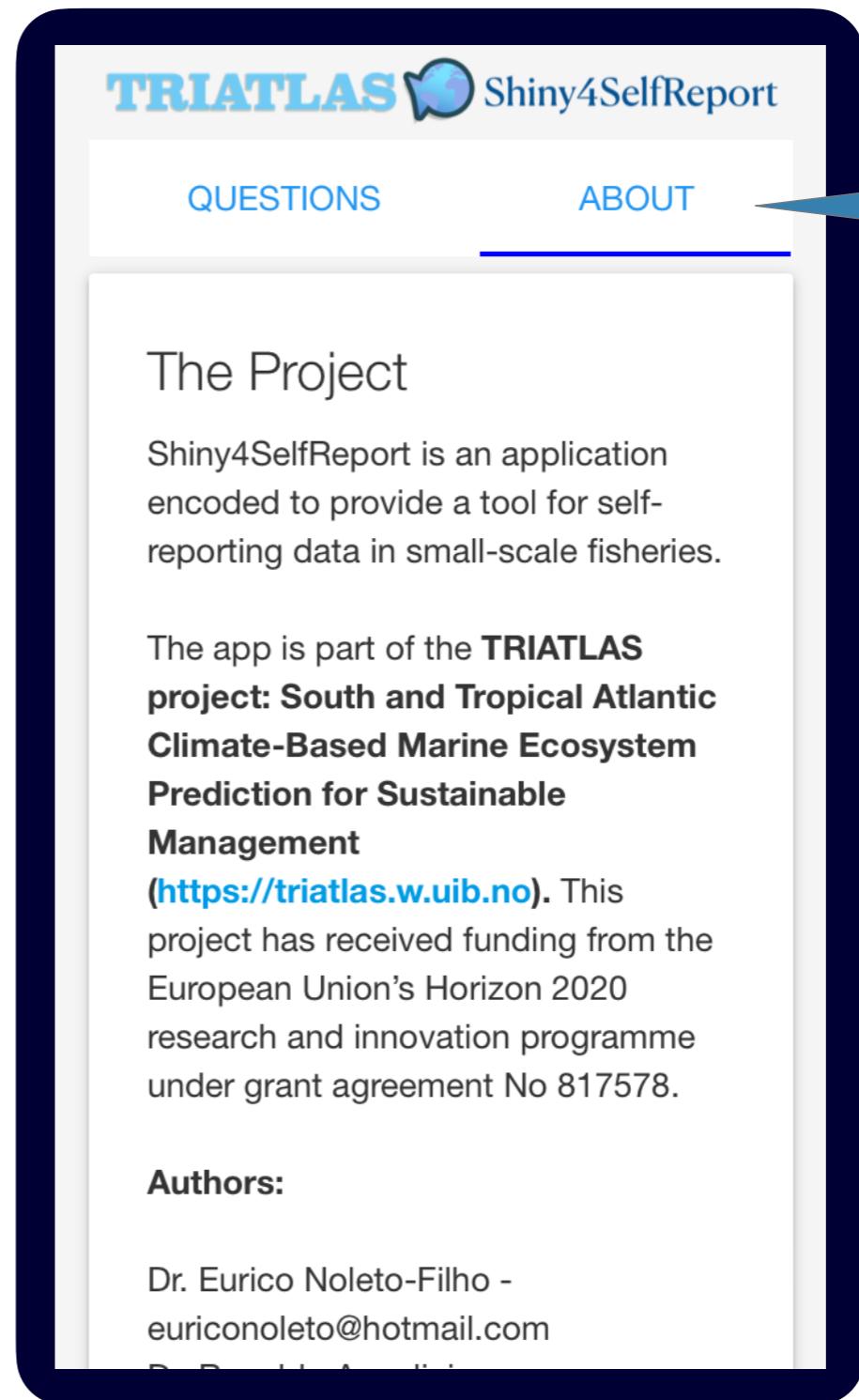
Shiny4SelfReport provides a user and a developer interface. The user interface is divided into two tabs: **Questions** and **About**. At the **Questions** section, users can input the information that will be stored in the **dropbox repository** as a CSV file (<https://dropbox.com>).

In this section, users can input information about their fisheries (e.g. Photos, Catch in kg, Prices), and upload to the server.

The screenshot shows a mobile-style user interface for 'Shiny4SelfReport'. At the top, there's a header with the 'TRIATLAS' logo and a small globe icon, followed by the text 'Shiny4SelfReport'. Below the header, there are two tabs: 'QUESTIONS' (which is active) and 'ABOUT'. The main content area is divided into sections. The first section, 'User Information', contains fields for 'User ID' and 'Vessel ID', each with a corresponding input field. The second section, 'Period & Effort', contains a 'Date' field set to '2020-08-04' and a 'Days fishing' field with a teal progress bar indicating the value '1'.

User Interface

At the **About** section, users learn more about the authors, the TRIATLAS project, and the application and server **Terms of Use**. This application is hosted on a Shinyapps.io server <https://www.shinyapps.io/>. By using this App, you agree with the terms of use described by Shinnyaps.io: <https://www.rstudio.com/about/shinyapps-terms-use/>.



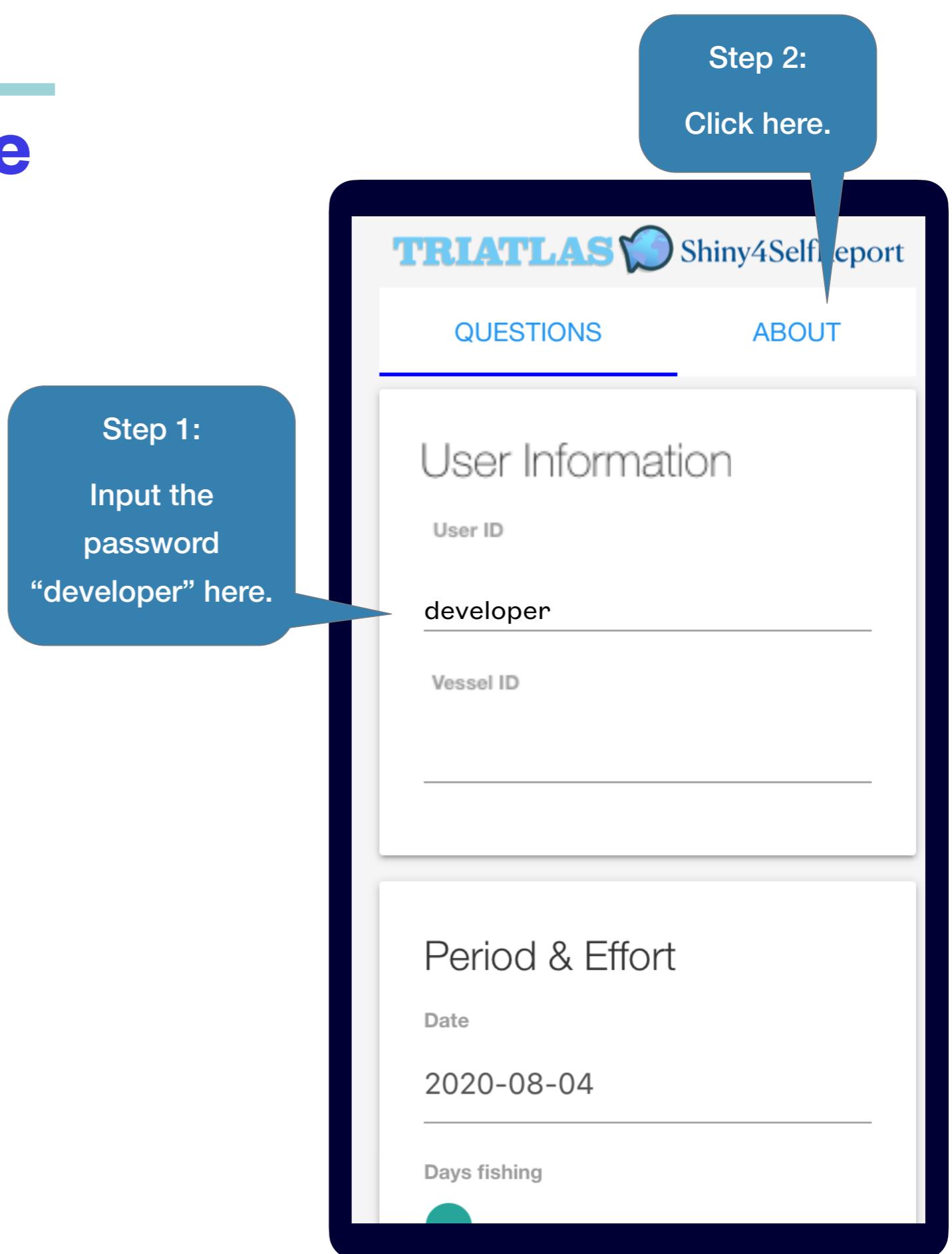
The About section.

Developer Interface

DEVELOPER

1. *Editing the inputs*
2. *Exporting the user code*
3. *Code to Visualize and Download the server data.*

The developer interface lets you edit and export the code, creating your own and personalized application. To access this interface, insert the password “developer” in the **User ID** input of the **User information** box.

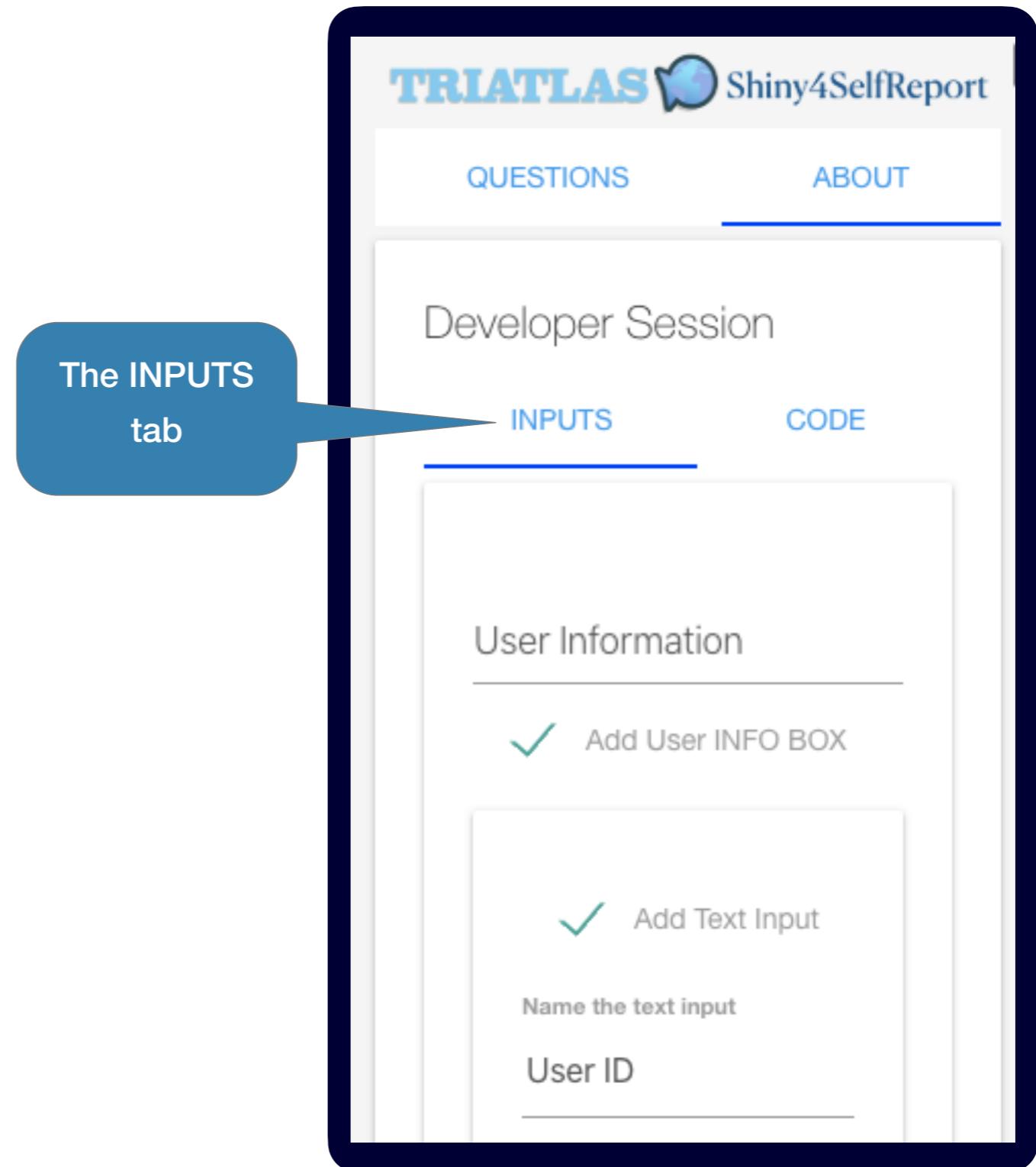


Developer Interface

DEVELOPER

1. *Editing the inputs*
2. *Exporting the user code*
3. *Code to Visualize and Download the server data.*

The developer interface is divided into two tabs: The **Inputs** and the **Code**. The “Inputs” tab allows you to customize all the inputs and titles available at the **User interface**.



Developer Interface

DEVELOPER

1. *Editing the inputs*

2. **Exporting the user code**

3. *Code to Visualize and Download
the server data.*

The **Code** tab is divided into two subtabs: the **Client Code** and the **Developer Code**. The **Client Code** subtab displays the R code with all the changes made at the **Inputs** tab. You must copy and paste the code in RStudio. **Be aware, you should install all the required packages before running the code in R.**



Developer Interface

DEVELOPER

1. *Editing the inputs*
2. *Exporting the user code*
3. ***Code to Visualize and Download the server data.***

The **Developer Code** subtab displays the R code that allows the app to download all the data stored in the cloud. You must copy and paste the code in RStudio.



Developer Interface

DEVELOPER

1. *Editing the inputs*
2. *Exporting the user code*
3. **Code to Visualize and Download the server data.**

After running the code, a new interface will appear. This interface allows the app to gather all the information on the server in a single CSV file and download it. Also, the user can download the code directly from the dropbox directory (<https://dropbox.com>).

The screenshot shows a Shiny application interface titled "TRIATLAS Shiny4SelfReport". At the top, there is a logo of a globe with a fish and the text "TRIATLAS" in blue. To the right of the logo is the text "Shiny4SelfReport". Below the title, there is a table with the following columns: User_ID, Vessel_ID, Date, Days_fishing, and Species1_1. The table has one row with the following data: 1, User01, Vessel01, 2020-08-06, and character(0). At the bottom of the table, there are two buttons: "LOAD" and "DOWNLOAD". Two blue callout boxes point to these buttons: one points to "LOAD" with the text "Click to update the table", and another points to "DOWNLOAD" with the text "Download as CSV".

User_ID	Vessel_ID	Date	Days_fishing	Species1_1
All	All	All	All	All
1	User01	Vessel01	2020-08-06	character(0)

LOAD DOWNLOAD

Click to update the table

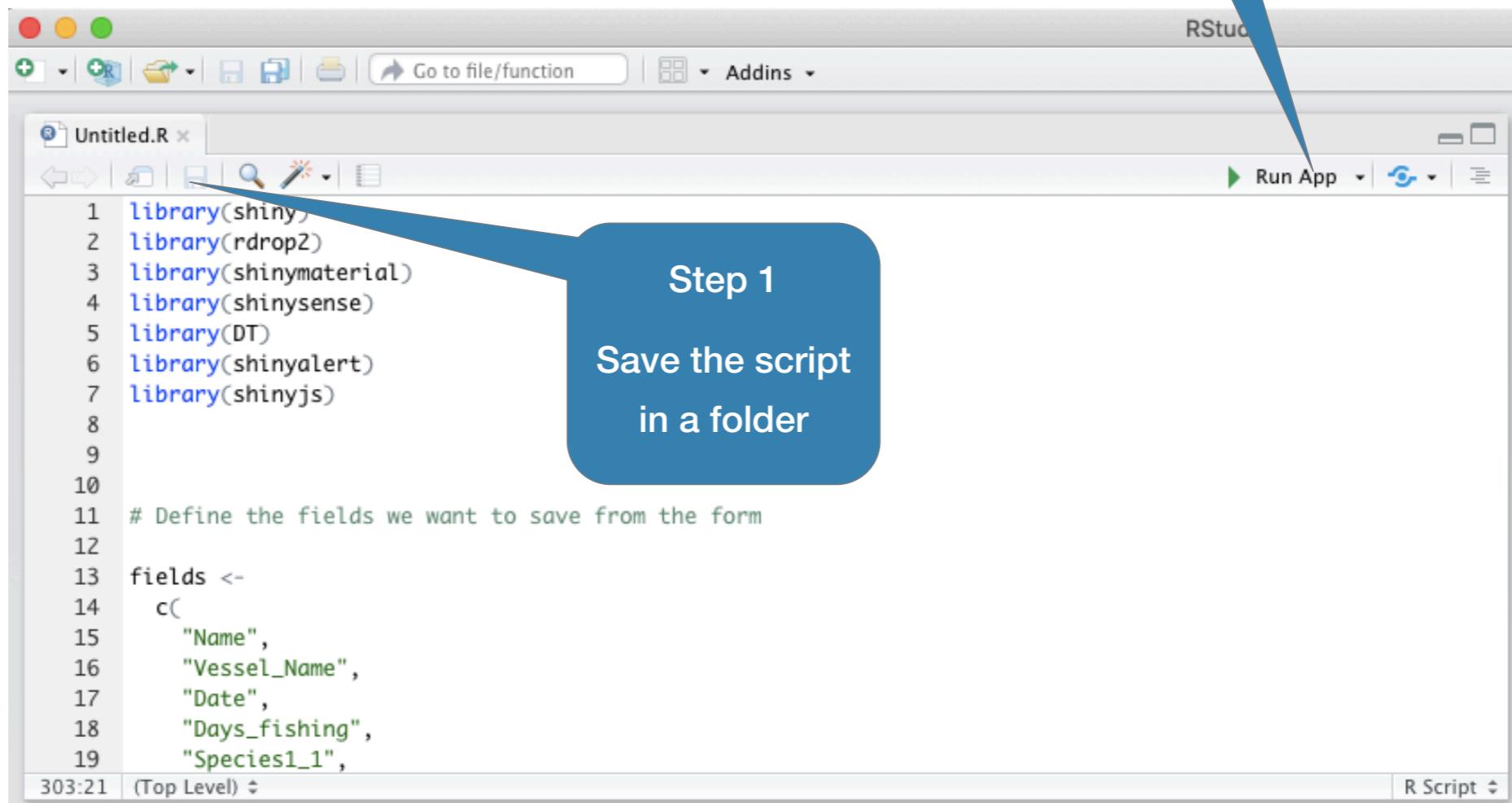
Download as CSV

Publishing the app on the server

Four steps are needed to save and publish your customized application.

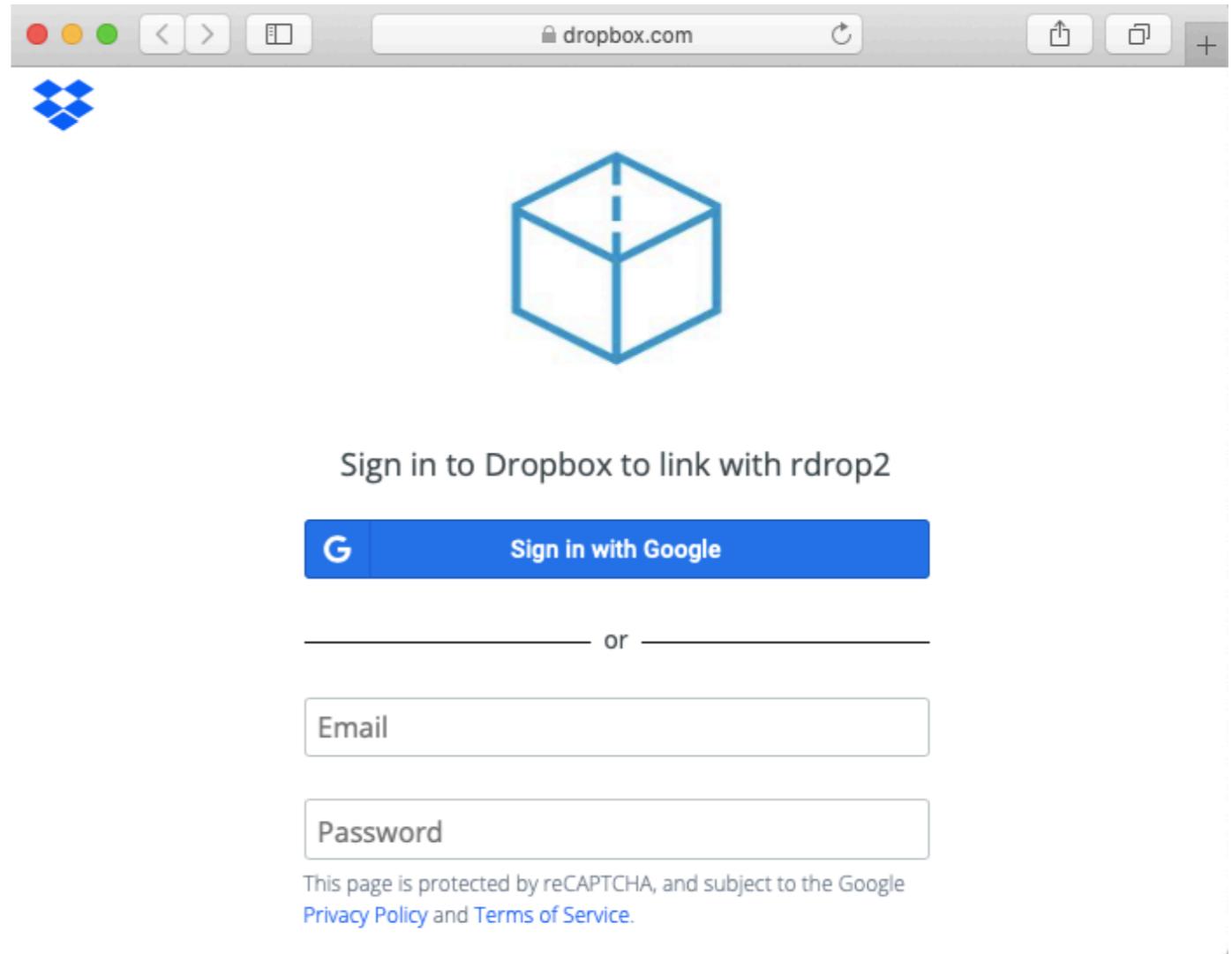
Step 1: You have to paste your script in R, and then save it in a folder.

Step 2: You need to run the App.



Publishing the app on the server

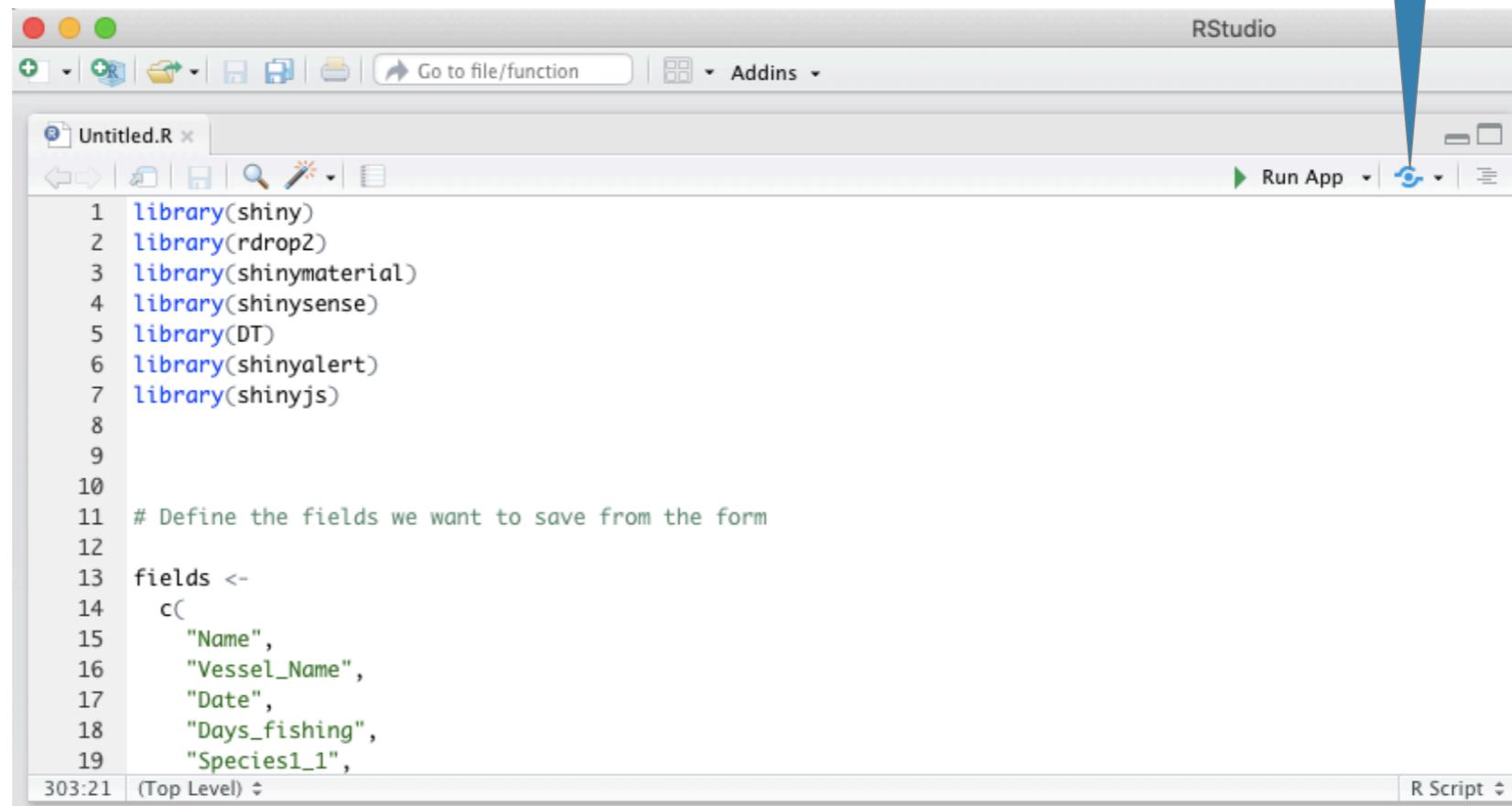
Step 3: After running the application, the dropbox login page will open to connect your customized application to your dropbox account.



Publishing the app on the server

Step 4: Finally, you can publish the App on a server by clicking on the **Publish** button. RStudio provides free and paid publishing plans.

Step 4
Publish the app on the web



The screenshot shows the RStudio interface with an R script file open. The title bar says "Untitled.R x". The code in the script is as follows:

```
1 library(shiny)
2 library(rdrop2)
3 library(shinymaterial)
4 library(shinysense)
5 library(DT)
6 library(shinyalert)
7 library(shinyjs)

8

9

10
11 # Define the fields we want to save from the form
12
13 fields <-
14   c(
15     "Name",
16     "Vessel_Name",
17     "Date",
18     "Days_fishing",
19     "Species1_1",
```

The status bar at the bottom left shows "303:21 (Top Level) ♦" and the bottom right shows "R Script ♦". A blue callout bubble with the text "Step 4 Publish the app on the web" points to the "Run App" button in the toolbar.

Bibliography

Ram, K., and Yochum, C. (2017), rdrop2: Programmatic Interface to the “Dropbox” API. R Package Version 0.8.1.

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