Step-by-step of how to create your personal website using R blogdown, Hugo, and GitHub.

By: Monsuru Adepeju (www.madepeju.com)

Date: 12/02/2019.

1. Sign up on GitHub:

(i) Sign up on **'GitHub.com'** (if you don't already have one): https://github.com/join?source=header-home

2. Installation

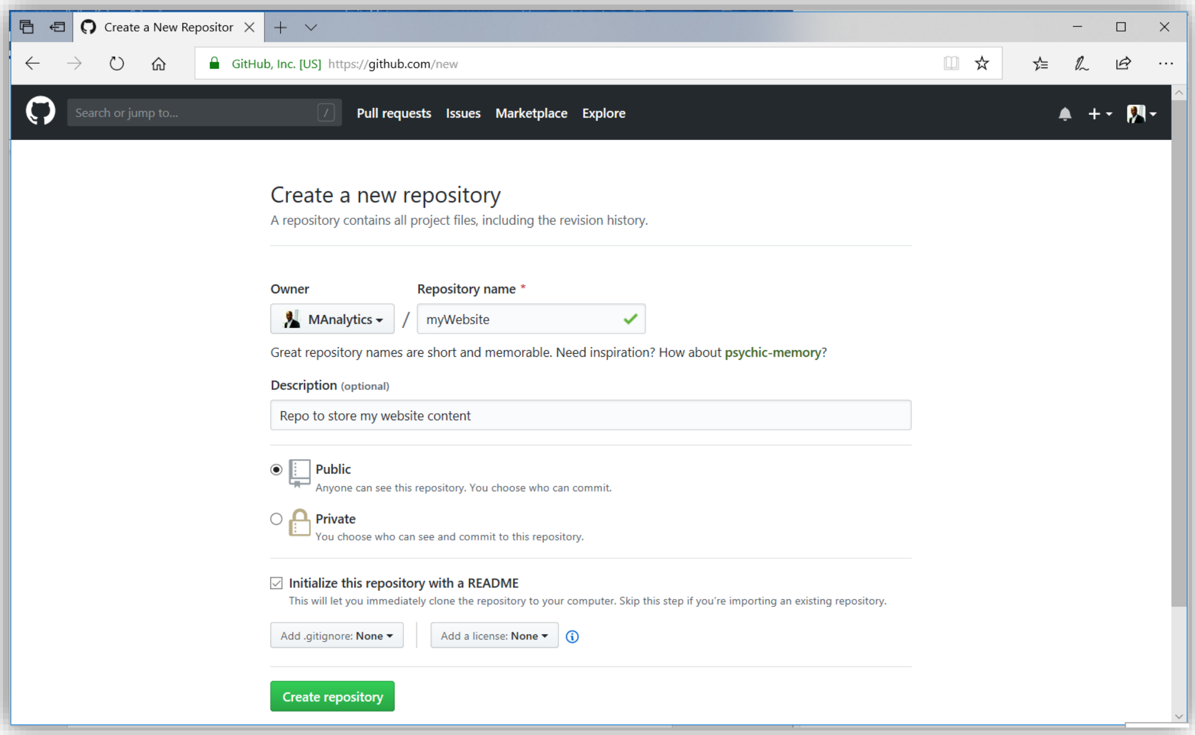
(i) Install ***Desktop GitHub** software (if you don't already have it).* After the installation, you can set it up (i.e. log into it) with your GitHub account details (above). Check your '*My Document*' folder on your local PC, you should see that a folder named '*GitHub*' has been created.

3. Create a GitHub Repository

(i) Sign into your GitHub account (in your web browser).

(ii) At the top right-hand corner of the page, click the + sign and select 'New *repository*'.

(iii) For illustration, I created a repo called '*myWebsite*' ('repo' means 'repository). This repo will hold all the contents of our website. You can type a short description if you want. Check the 'Public' option (for now), and also check '*Initialise this repository with a README*' option.



Create a new repository

A repository contains all project files, including the revision history.

Owner: MAnalytics / Repository name *: myWebsite

Great repository names are short and memorable. Need inspiration? How about psychic-memory?

Description (optional): Repo to store my website content

● Public
Anyone can see this repository. You choose who can commit.

○ Private
You choose who can see and commit to this repository.

☑ Initialize this repository with a README
This will let you immediately clone the repository to your computer. Skip this step if you're importing an existing repository.

Add .gitignore: None | Add a license: None

Create repository

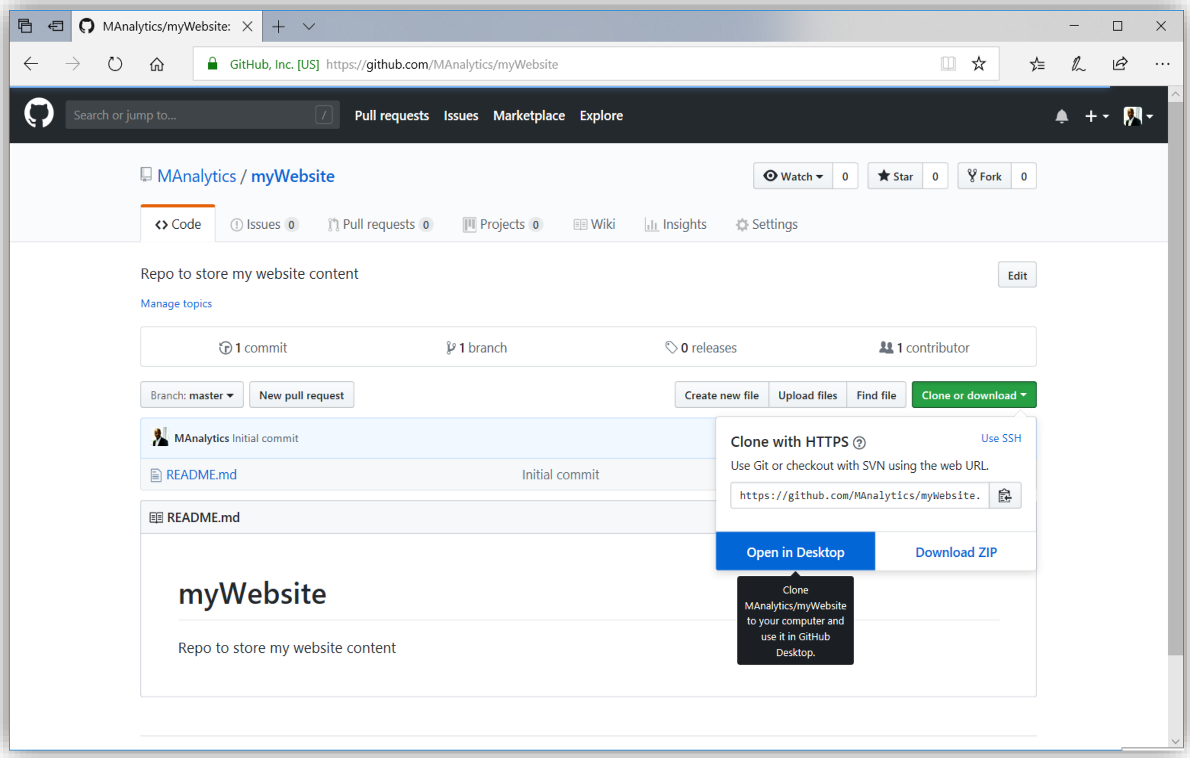
4. Cloning your repo onto your local machine

(i) Make sure you are signed in to your GitHub account (web browser).

(ii) Click the profile pic at the right-hand corner of the GitHub page, and select ‘*Your Repositories*’, to show all repositories in your account. Find and click on the new repository that you created (i.e. ‘*myWebsite*’).

(iii) Click on ‘*Clone or download*’ button.

(iv) Click on ‘*Open in Desktop*’ (This means that you are instructing GitHub to clone this repo onto your local PC and at the same time open it using the ‘***Desktop GitHub’*** software that you installed.



Repo to store my website content

Clone with HTTPS

Use Git or checkout with SVN using the web URL.

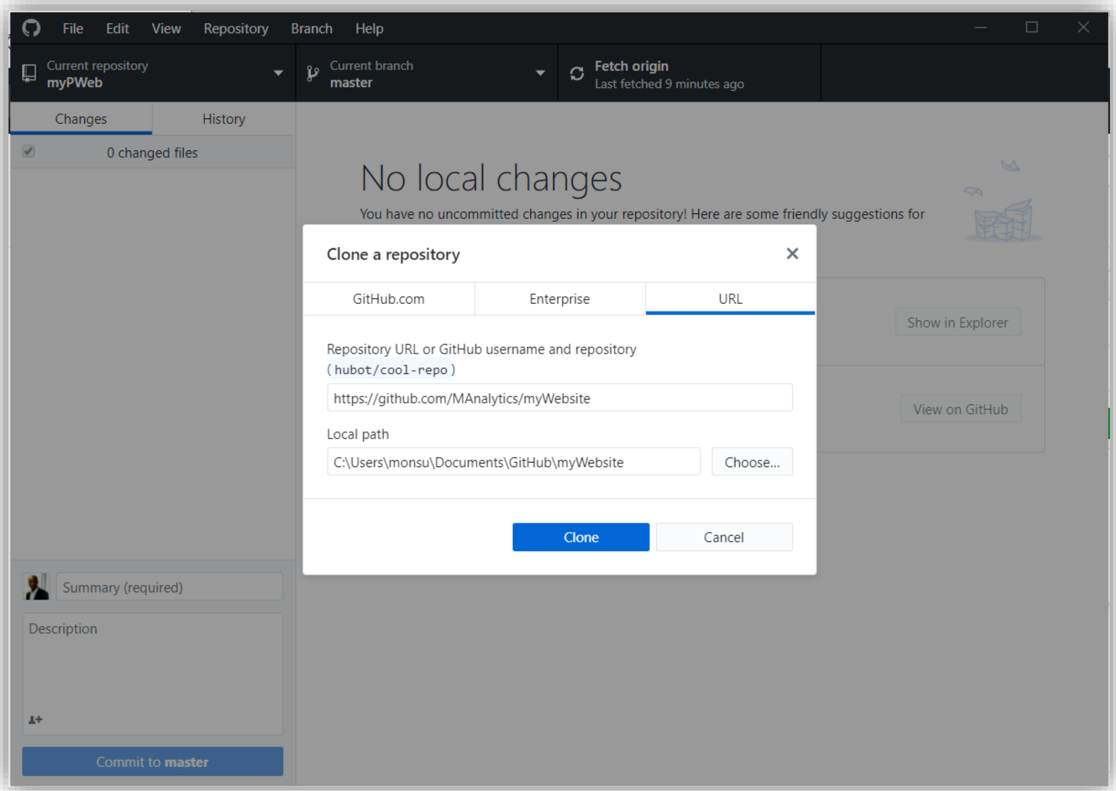
`https://github.com/MAnalytics/myWebsite.`

Clone MAnalytics/myWebsite to your computer and use it in GitHub Desktop.

myWebsite

Repo to store my website content

(v) Your ***Desktop GitHub*** software will be loaded automatically, and you should see a similar window as below. Check that the ‘*Local path*’ box ends with this: *“….\GitHub\myWebsite*”



No local changes

You have no uncommitted changes in your repository! Here are some friendly suggestions for

Clone a repository

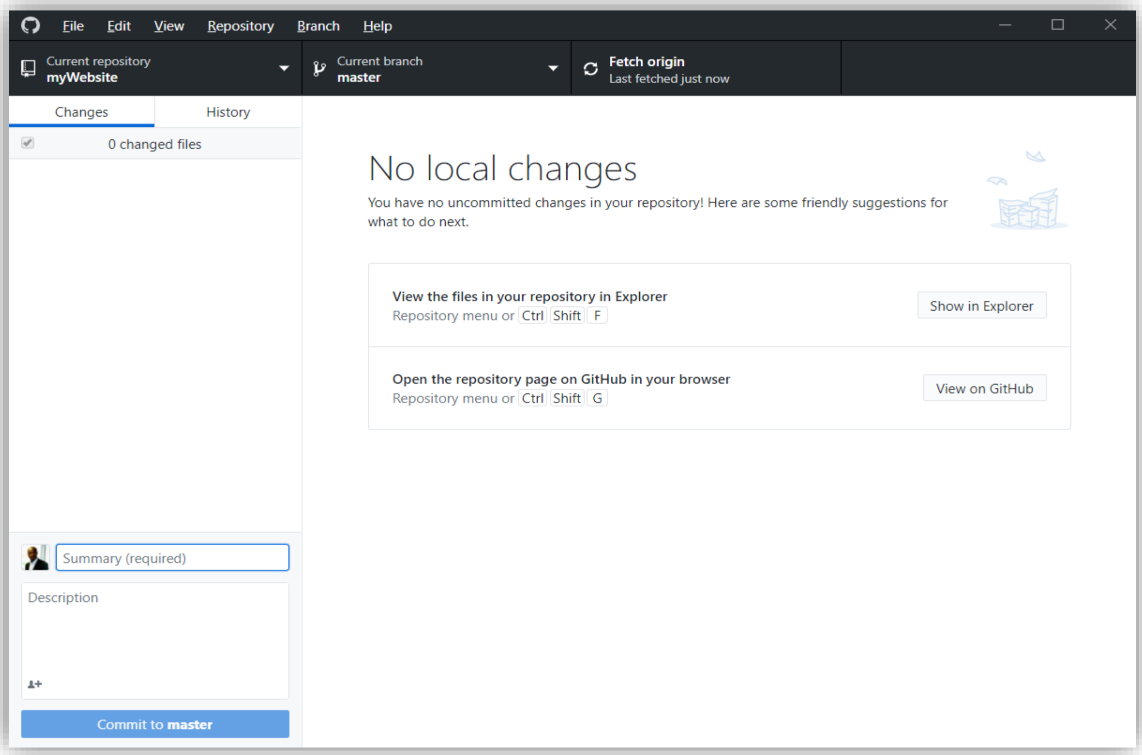
Repository URL or GitHub username and repository (`hubot/cool-repo`)

https://github.com/MAnalytics/myWebsite

Local path

C:\Users\monsu\Documents\GitHub\myWebsite

(vi) Click on '*Clone*' button.



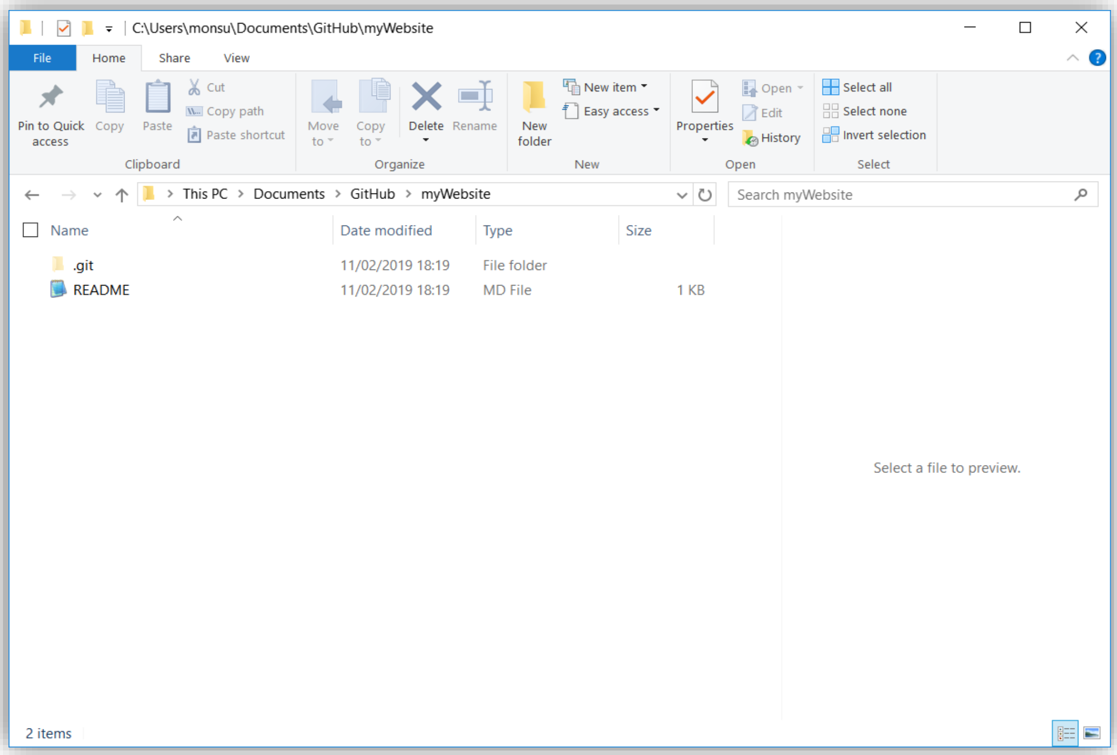
No local changes

You have no uncommitted changes in your repository! Here are some friendly suggestions for what to do next.

View the files in your repository in Explorer
Repository menu or Ctrl Shift F

Open the repository page on GitHub in your browser
Repository menu or Ctrl Shift G

(vii) Now that you have successfully cloned the repo onto your PC, navigate to *"....\My Document\GitHub*" and delete the *README.md* file. Don't add anything else to this folder just yet, *blogdown* requires that the directory is empty (However, do not delete the *.git* folder that appears).

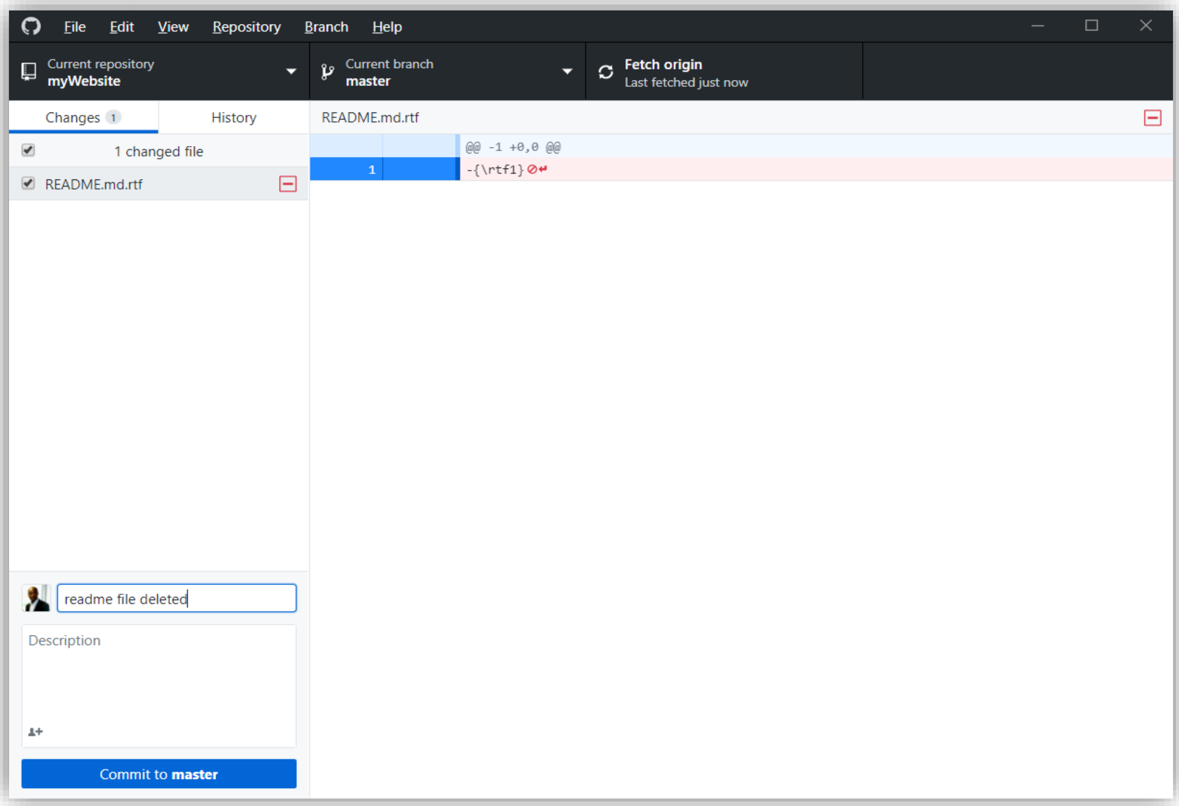


Name	Date modified	Type	Size
.git	11/02/2019 18:19	File folder	
README	11/02/2019 18:19	MD File	1 KB

Select a file to preview.

2 items

(viii) Check the '***Desktop GitHub***' program, you will see that the software is tracking the changes that you have made to the folder. That is, it detects the deletion you made from '*myWebsite*' folder. This means that any time you make any changes, whatsoever, inside this folder, the software will detect it.



```
@@ -1 +0,0 @@
1 -{\rtf1}
```

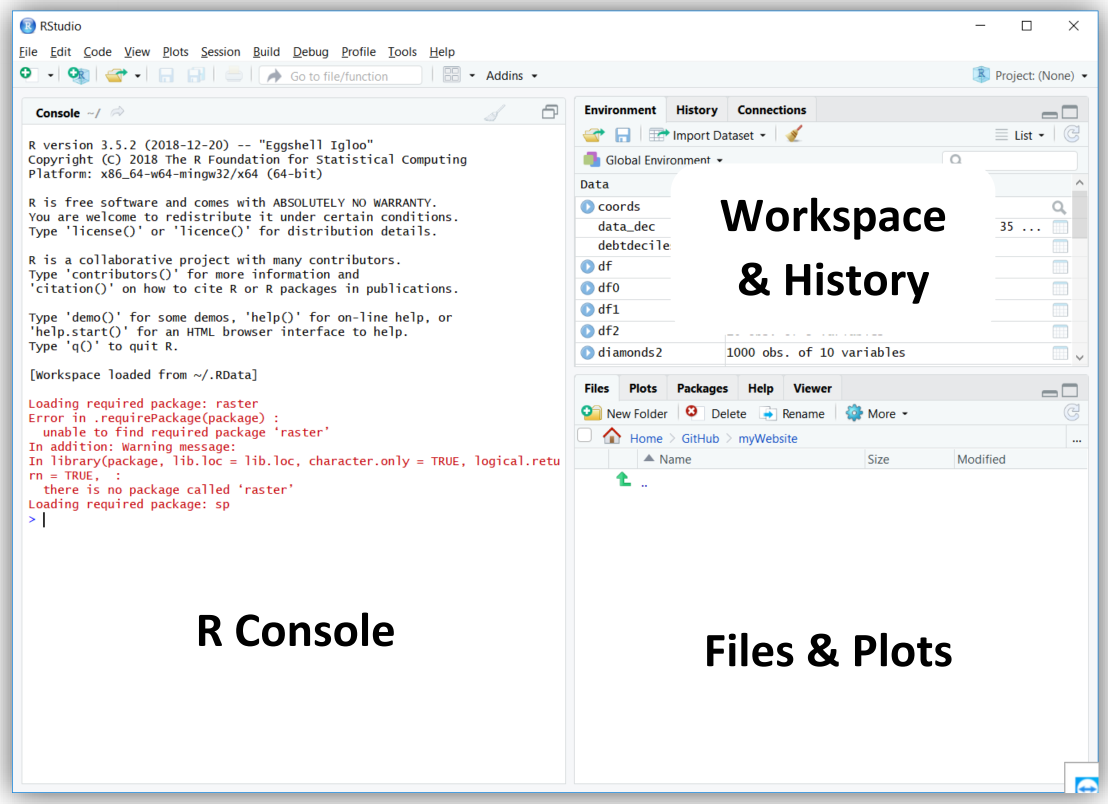
(ix) Next, you now need to update the corresponding '*myWebsite*' repo on your GitHub account. This can be done as follows:

- Type a short description of the changes in the small description box beside your profile pic e.g. 'readme file deleted'.
- Click "*Commit to master*" button, and then click "*Push origin*" button. (Congratulations! You have just updated your GitHub '*myWebsite*' repo from your local machine)

FYI: This is one of the effective ways of updating the contents of a GitHub account.

5. Downloading the website template using RStudio

(i) Load ***RStudio***.



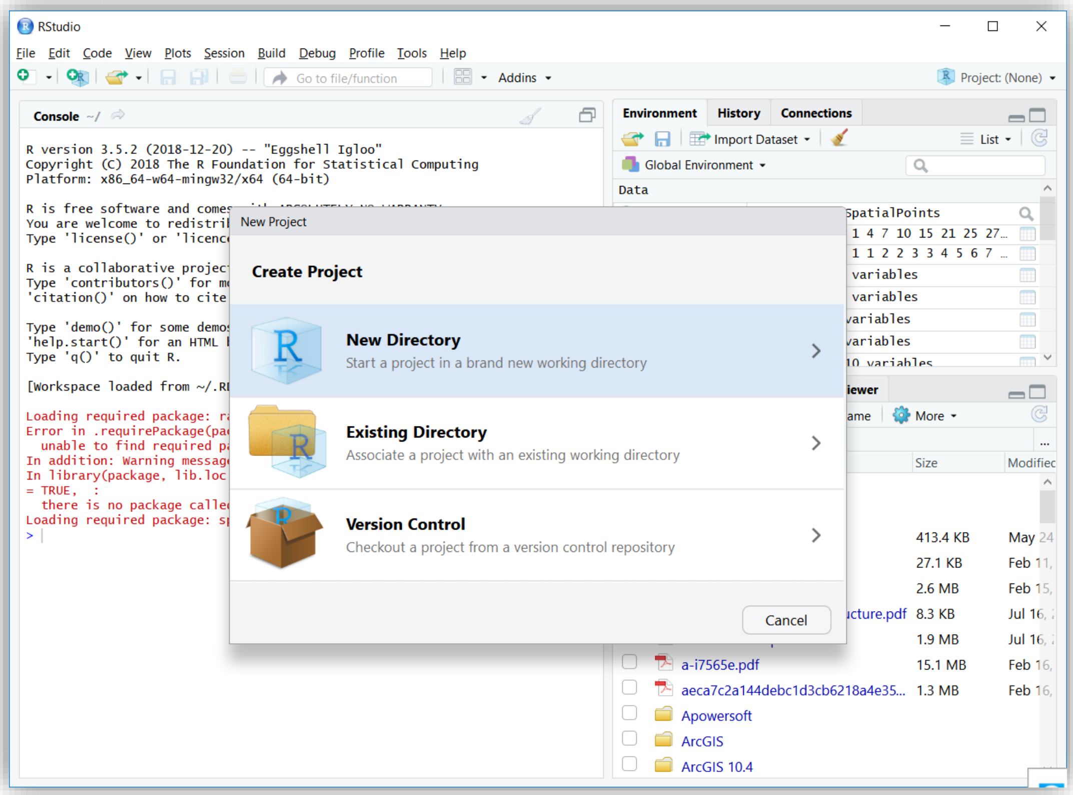
```
R version 3.5.2 (2018-12-20) -- "Eggshell Igloo"
Copyright (C) 2018 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

[Workspace loaded from ~/.RData]

Loading required package: raster
Error in .requirePackage(package) :
  unable to find required package 'raster'
In addition: Warning message:
In library(package, lib.loc = lib.loc, character.only = TRUE, logical.retu
rn = TRUE,  :
  there is no package called 'raster'
Loading required package: sp
> 
```

(ii) Download the ‘*blogdown*’ package by typing the code:

> *> install.packages(“blogdown”)*

(iii) When successfully installed, re-load ***RStudio***. Under the ‘*Files & Plots*’ section, select ‘*Files*’ tab and navigate to ‘*myWesite*’ folder (it should be empty).

(iv) Click on ‘*File*’ menu, select ‘*New Projects…*”, and select ‘*New Directory*’.



```
R version 3.5.2 (2018-12-20) -- "Eggshell Igloo"
Copyright (C) 2018 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

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You are welcome to redistril
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R is a collaborative projec
Type 'contributors()' for m
'citation()' on how to cite

Type 'demo()' for some demos
'help.start()' for an HTML
Type 'q()' to quit R.

[Workspace loaded from ~/.RI

Loading required package: r
Error in .requirePackage(pa
  unable to find required pa
In addition: Warning message
In library(package, lib.loc
= TRUE,  :
  there is no package calle
Loading required package: s
> |
```

New Project

Create Project

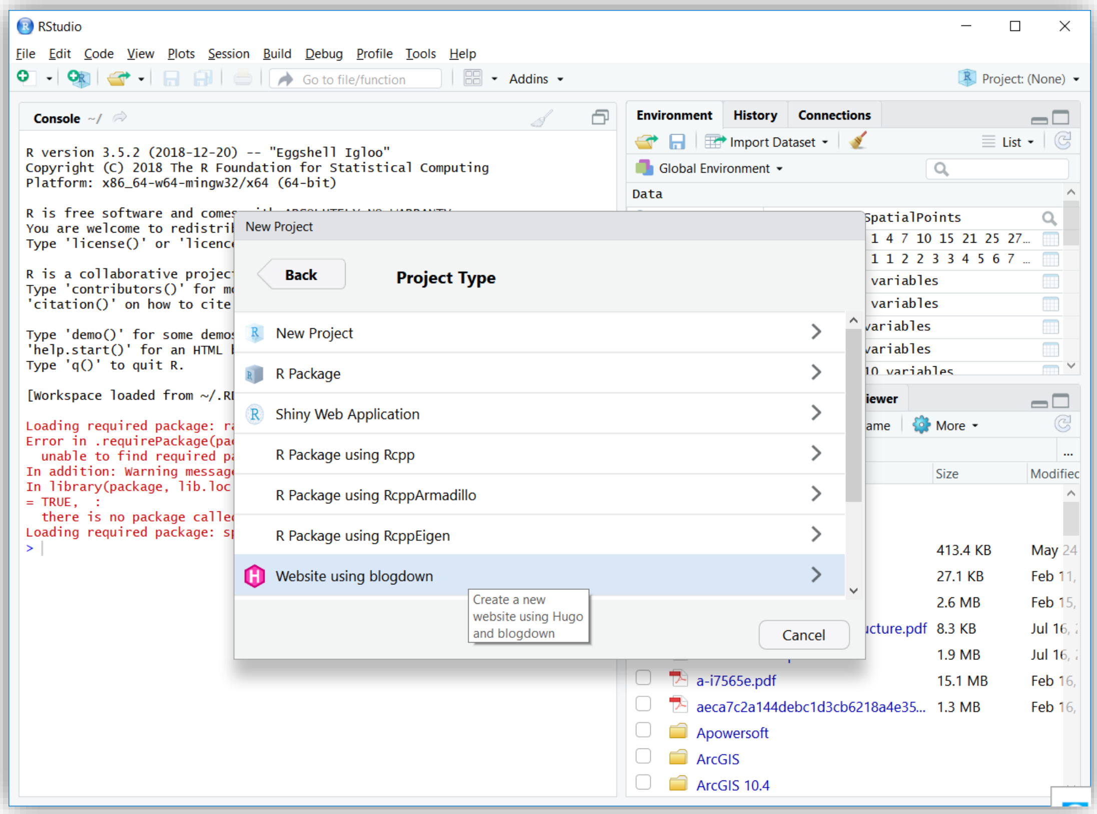
New Directory
Start a project in a brand new working directory

Existing Directory
Associate a project with an existing working directory

Version Control
Checkout a project from a version control repository

Cancel

(v) Select '*Website using blogdown*'



```
R version 3.5.2 (2018-12-20) -- "Eggshell Igloo"
Copyright (C) 2018 The R Foundation for Statistical Computing
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'citation()' on how to cite

Type 'demo()' for some demos
'help.start()' for an HTML
Type 'q()' to quit R.

[Workspace loaded from ~/.RI

Loading required package: r
Error in .requirePackage(pa
  unable to find required pa
In addition: Warning message
In library(package, lib.loc
= TRUE,  :
  there is no package calle
Loading required package: s
> |
```

New Project

Back **Project Type**

- New Project
- R Package
- Shiny Web Application
- R Package using Rcpp
- R Package using RcppArmadillo
- R Package using RcppEigen
- Website using blogdown

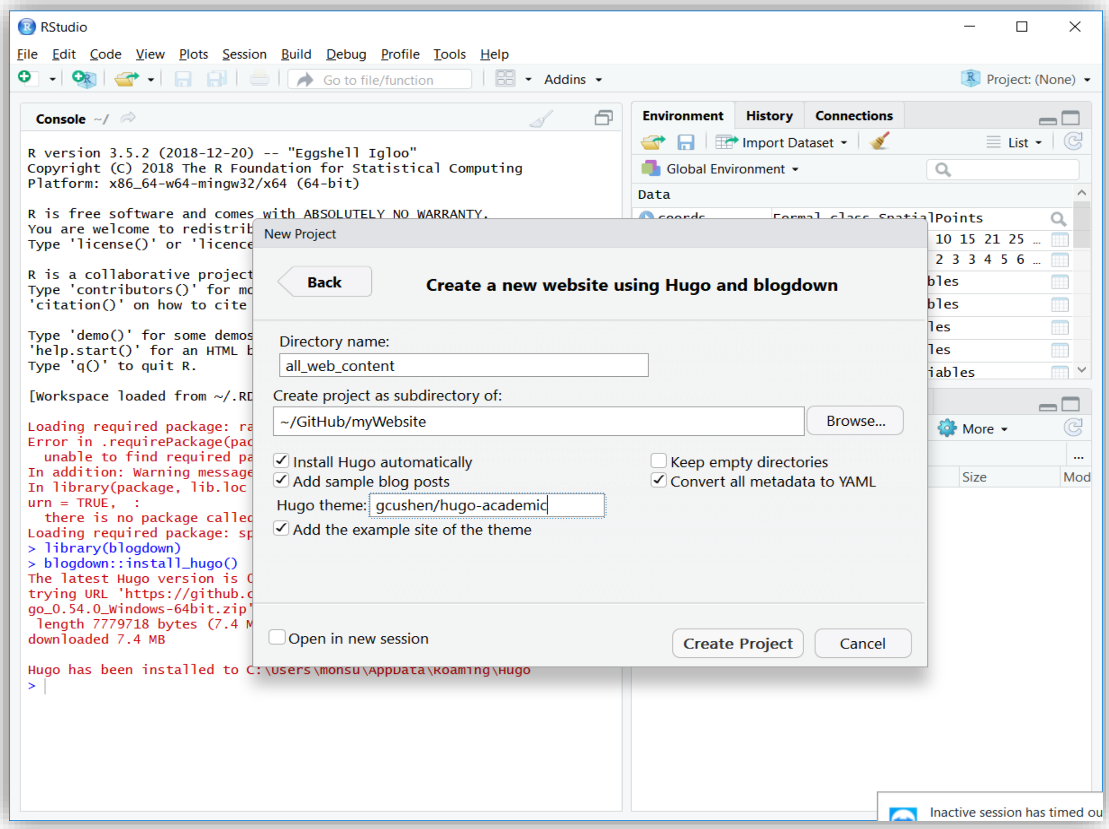
Create a new website using Hugo and blogdown

Cancel

(vi) In the '*Directory name*:' box, enter a name. Let's say: '*all_web_content*'. Ensure that you have the path suffix "…/*GitHub/myWebsite*" under the '*Create project as subdirectory of:*'

(vii) In the '*Hugo theme*:' box, enter the "*GitHub_Username/templateRepo*" of the Hugo template that intend to use. For example, to use the hugo-academic template, you have "*gcushen/hugo-academic*"**. *I recommend that you experiment with this template first***. The collection of the hugo templates can be found here: *https://themes.gohugo.io/*. You can *also try: "manalytics/mywebTemplate"* in order to use the template of my website: www.madepeju.com which was also based on the original hugo-academic template.

Then, click 'Create Project'.


RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function
Addins
Project: (None)
Console ~/
Environment History Connections
Import Dataset
List
Global Environment
Data
More
Size
Mod
Inactive session has timed ou

```
R version 3.5.2 (2018-12-20) -- "Eggshell Igloo"
Copyright (C) 2018 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

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'citation()' on how to cite

Type 'demo()' for some demos
'help.start()' for an HTML b
Type 'q()' to quit R.

[Workspace loaded from ~/.RD

Loading required package: ra
Error in .requirePackage(pac
  unable to find required pa
In addition: Warning message
In library(package, lib.loc
urn = TRUE,  :
  there is no package callec
Loading required package: sp
> library(blogdown)
> blogdown::install_hugo()
The latest Hugo version is 0
trying URL 'https://github.c
go_0.54.0_Windows-64bit.zip'
 length 7779718 bytes (7.4 M
downloaded 7.4 MB

Hugo has been installed to C:\Users\monsu\AppData\Roaming\Hugo
>
```

New Project

Back

Create a new website using Hugo and blogdown

Directory name: all_web_content

Create project as subdirectory of: ~/GitHub/myWebsite Browse...

☑ Install Hugo automatically
☐ Keep empty directories
☑ Add sample blog posts
☑ Convert all metadata to YAML
Hugo theme: gcushen/hugo-academic
☑ Add the example site of the theme

☐ Open in new session

Create Project Cancel

(viii) You might get some error messages, just ignore them. From the '*Files & Plots*' section, navigate to confirm that an '*all_web_content*' folder has been created as a subdirectory of *myWebsite* folder. The *all_web_content* folder will contain all the template files you need to build a website.

(ix) Set the *all_web_content* folder as your working directory using the *setwd()* command.

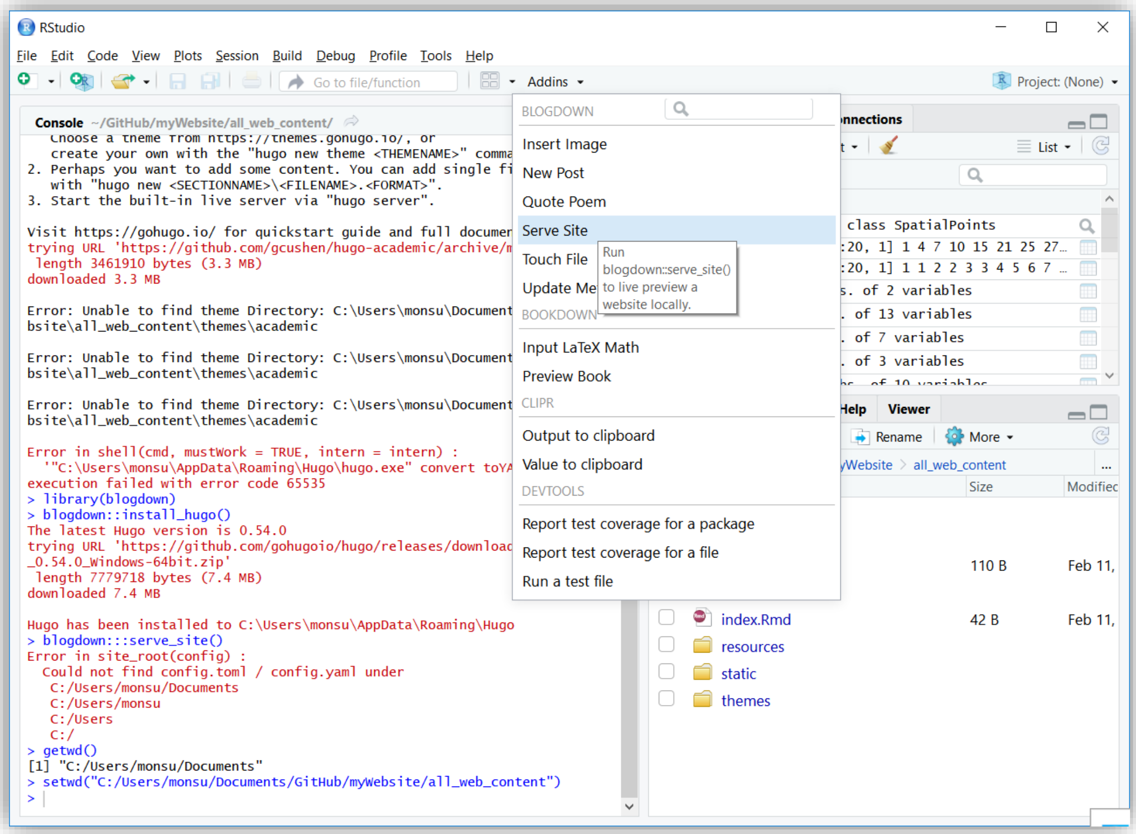
> \> setwd("C:/Documents/GitHub/myWebsite/*all_web_content*") #note the use of forward slash "/" instead of "\".

(x) Loading the libraries and installing hugo.

> \> *library(blogdown)*
>
> \> *blogdown::install_hugo() # installing hugo – a static site developer.*
>
> \> *blogdown::update_hugo() # make sure that you run this regularly too in order to keep hugo updated.*

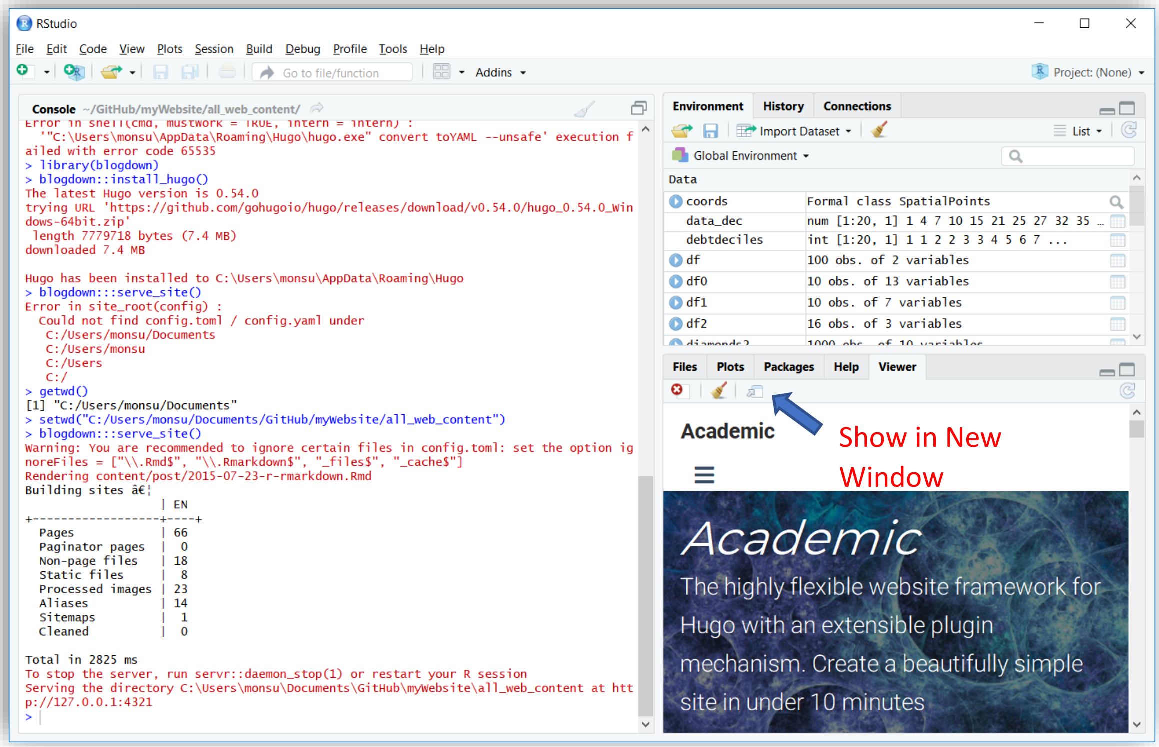
> *blogdown::hugo_version()* *#It is important that you take note of the current version of the hugo using this same command and monitor whether it has changed. Why do you need to be doing this? Because you will need to enter the version of hugo in the Environmental Variables* settings when deploying your website. I *recommend using Netlify* (*www.netlify.com*) to deploy your website because of its great compatibility with GitHub

(xi) Next, select '*Addins*' and click '*Serve Site*' to build the website.



```
   Choose a theme from https://themes.gohugo.io/, or
   create your own with the "hugo new theme <THEMENAME>" comma
2. Perhaps you want to add some content. You can add single fi
   with "hugo new <SECTIONNAME>\<FILENAME>.<FORMAT>".
3. Start the built-in live server via "hugo server".

Visit https://gohugo.io/ for quickstart guide and full documer
trying URL 'https://github.com/gcushen/hugo-academic/archive/m
 length 3461910 bytes (3.3 MB)
downloaded 3.3 MB

Error: Unable to find theme Directory: C:\Users\monsu\Document
bsite\all_web_content\themes\academic

Error: Unable to find theme Directory: C:\Users\monsu\Document
bsite\all_web_content\themes\academic

Error: Unable to find theme Directory: C:\Users\monsu\Document
bsite\all_web_content\themes\academic

Error in shell(cmd, mustWork = TRUE, intern = intern) :
  '"C:\Users\monsu\AppData\Roaming\Hugo\hugo.exe" convert toYA
execution failed with error code 65535
> library(blogdown)
> blogdown::install_hugo()
The latest Hugo version is 0.54.0
trying URL 'https://github.com/gohugoio/hugo/releases/downloac
_0.54.0_Windows-64bit.zip'
 length 7779718 bytes (7.4 MB)
downloaded 7.4 MB

Hugo has been installed to C:\Users\monsu\AppData\Roaming\Hugo
> blogdown:::serve_site()
Error in site_root(config) :
  Could not find config.toml / config.yaml under
   C:/Users/monsu/Documents
   C:/Users/monsu
   C:/Users
   C:/
> getwd()
[1] "C:/Users/monsu/Documents"
> setwd("C:/Users/monsu/Documents/GitHub/myWebsite/all_web_content")
> 
```

(xii) If the website is built successfully, you will see a preview in the '*Files & Plots*' section of the ***RStudio***. You can also preview it in a web browser by clicking the '*Show in New Window*' icon of the '*Files & Plots*' section.



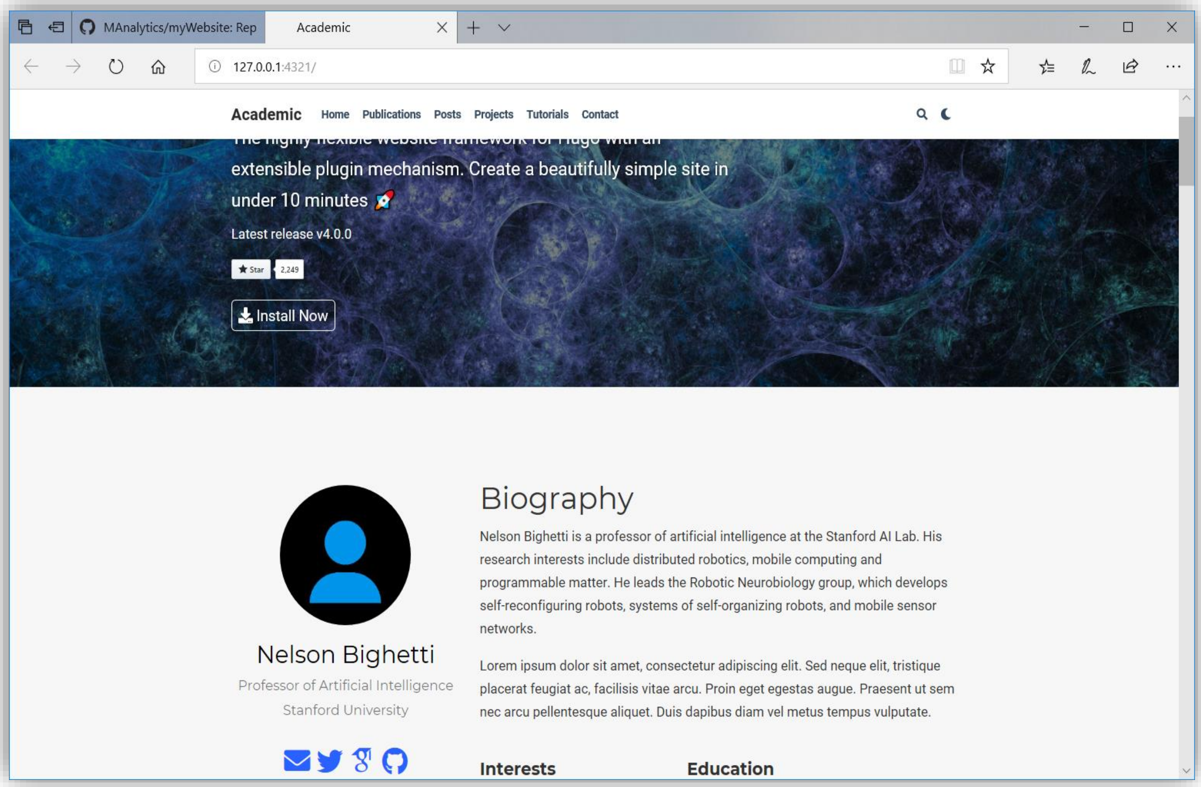
```
Error in shell(cmd, mustWork = TRUE, intern = intern) :
  '"C:\Users\monsu\AppData\Roaming\Hugo\hugo.exe" convert toYAML --unsafe' execution f
ailed with error code 65535
> library(blogdown)
> blogdown::install_hugo()
The latest Hugo version is 0.54.0
trying URL 'https://github.com/gohugoio/hugo/releases/download/v0.54.0/hugo_0.54.0_Win
dows-64bit.zip'
 length 7779718 bytes (7.4 MB)
downloaded 7.4 MB

Hugo has been installed to C:\Users\monsu\AppData\Roaming\Hugo
> blogdown:::serve_site()
Error in site_root(config) :
  Could not find config.toml / config.yaml under
   C:/Users/monsu/Documents
   C:/Users/monsu
   C:/Users
   C:/
> getwd()
[1] "C:/Users/monsu/Documents"
> setwd("C:/Users/monsu/Documents/GitHub/myWebsite/all_web_content")
> blogdown:::serve_site()
Warning: You are recommended to ignore certain files in config.toml: set the option ig
noreFiles = ["\\.Rmd$", "\\.Rmarkdown$", "_files$", "_cache$"]
Rendering content/post/2015-07-23-r-rmarkdown.Rmd
Building sites â€¦
                   | EN
+------------------+----+
  Pages            | 66
  Paginator pages  |  0
  Non-page files   | 18
  Static files     |  8
  Processed images | 23
  Aliases          | 14
  Sitemaps         |  1
  Cleaned          |  0

Total in 2825 ms
To stop the server, run servr::daemon_stop(1) or restart your R session
Serving the directory C:\Users\monsu\Documents\GitHub\myWebsite\all_web_content at htt
p://127.0.0.1:4321
>
```

Data	
coords	Formal class SpatialPoints
data_dec	num [1:20, 1] 1 4 7 10 15 21 25 27 32 35 …
debtdeciles	int [1:20, 1] 1 1 2 2 3 3 4 5 6 7 ...
df	100 obs. of 2 variables
df0	10 obs. of 13 variables
df1	10 obs. of 7 variables
df2	16 obs. of 3 variables

RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function
Addins
Project: (None)
Console ~/GitHub/myWebsite/all_web_content/
Environment History Connections
Import Dataset
List
Global Environment
Files Plots Packages Help Viewer
Academic
Academic
The highly flexible website framework for Hugo with an extensible plugin mechanism. Create a beautifully simple site in under 10 minutes

Show in New Window

(xiii) You should have the same preview as below:



MAnalytics/myWebsite: Rep
Academic
127.0.0.1:4321/
Academic Home Publications Posts Projects Tutorials Contact
Star 2,249
Install Now
Interests
Education

The highly flexible website framework for Hugo with an extensible plugin mechanism. Create a beautifully simple site in under 10 minutes 🚀

Latest release v4.0.0

Nelson Bighetti

Professor of Artificial Intelligence

Stanford University

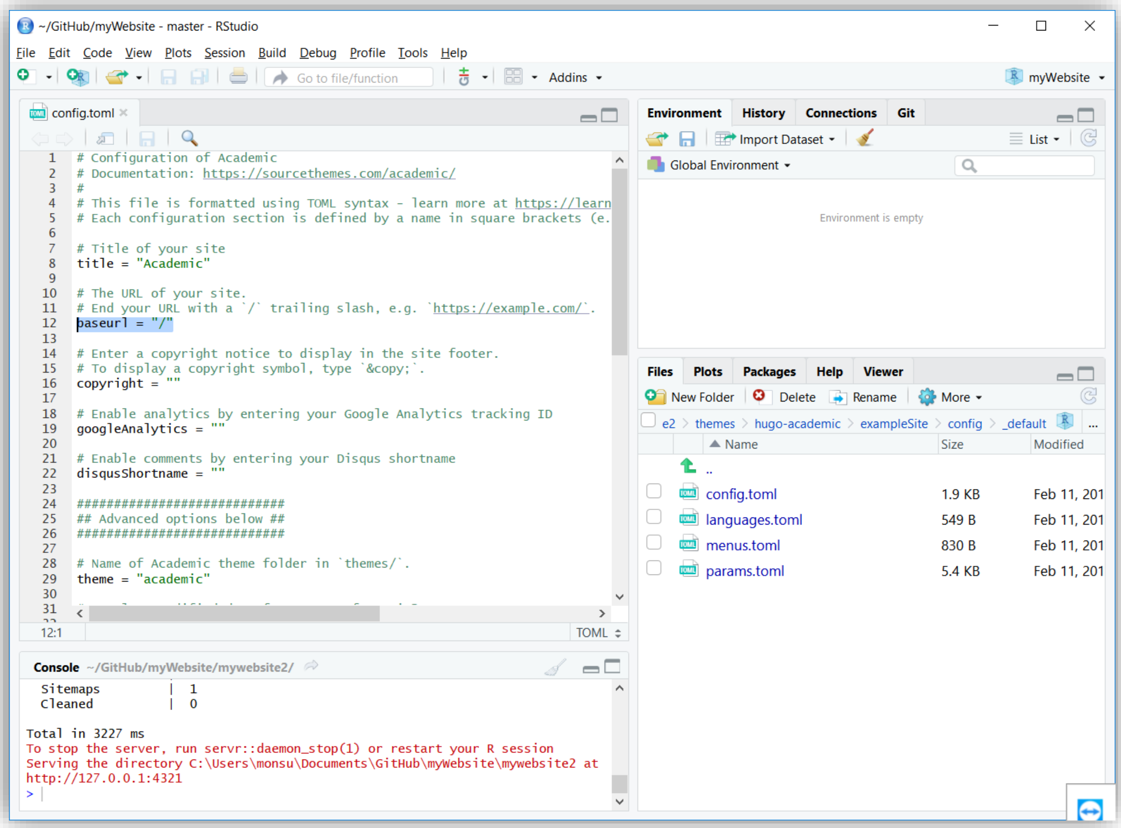
Biography

Nelson Bighetti is a professor of artificial intelligence at the Stanford AI Lab. His research interests include distributed robotics, mobile computing and programmable matter. He leads the Robotic Neurobiology group, which develops self-reconfiguring robots, systems of self-organizing robots, and mobile sensor networks.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed neque elit, tristique placerat feugiat ac, facilisis vitae arcu. Proin eget egestas augue. Praesent ut sem nec arcu pellentesque aliquet. Duis dapibus diam vel metus tempus vulputate.

6. Editing the website

(i) The first step towards editing this website (i.e. the content of the folder: *"…\My Document\GitHub\myWebsite"*) is to first locate the '*config.toml*' file and open it in **RStudio**. The '*config.toml*' file contains basic settings of your website such as the *theme* and most of the *home page* settings. All files with the extensions *.*md* and *.*Rmd* can be edited using RStudio while other files such as images can be added or deleted directly through the window explorer.



~/GitHub/myWebsite - master - RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function
Addins
myWebsite
config.toml
Environment History Connections Git
Import Dataset
List
Global Environment
Environment is empty
Files Plots Packages Help Viewer
New Folder Delete Rename More
e2 > themes > hugo-academic > exampleSite > config > _default

```
# Configuration of Academic
# Documentation: https://sourcethemes.com/academic/
#
# This file is formatted using TOML syntax - learn more at https://learn
# Each configuration section is defined by a name in square brackets (e.

# Title of your site
title = "Academic"

# The URL of your site.
# End your URL with a `/` trailing slash, e.g. `https://example.com/`.
baseurl = "/"

# Enter a copyright notice to display in the site footer.
# To display a copyright symbol, type `&copy;`.
copyright = ""

# Enable analytics by entering your Google Analytics tracking ID
googleAnalytics = ""

# Enable comments by entering your Disqus shortname
disqusShortname = ""

############################
## Advanced options below ##
############################

# Name of Academic theme folder in `themes/`.
theme = "academic"
```

12:1 TOML

Console ~/GitHub/myWebsite/mywebsite2/

```
  Sitemaps             |  1
  Cleaned              |  0

Total in 3227 ms
To stop the server, run servr::daemon_stop(1) or restart your R session
Serving the directory C:\Users\monsu\Documents\GitHub\myWebsite\mywebsite2 at
http://127.0.0.1:4321
> 
```

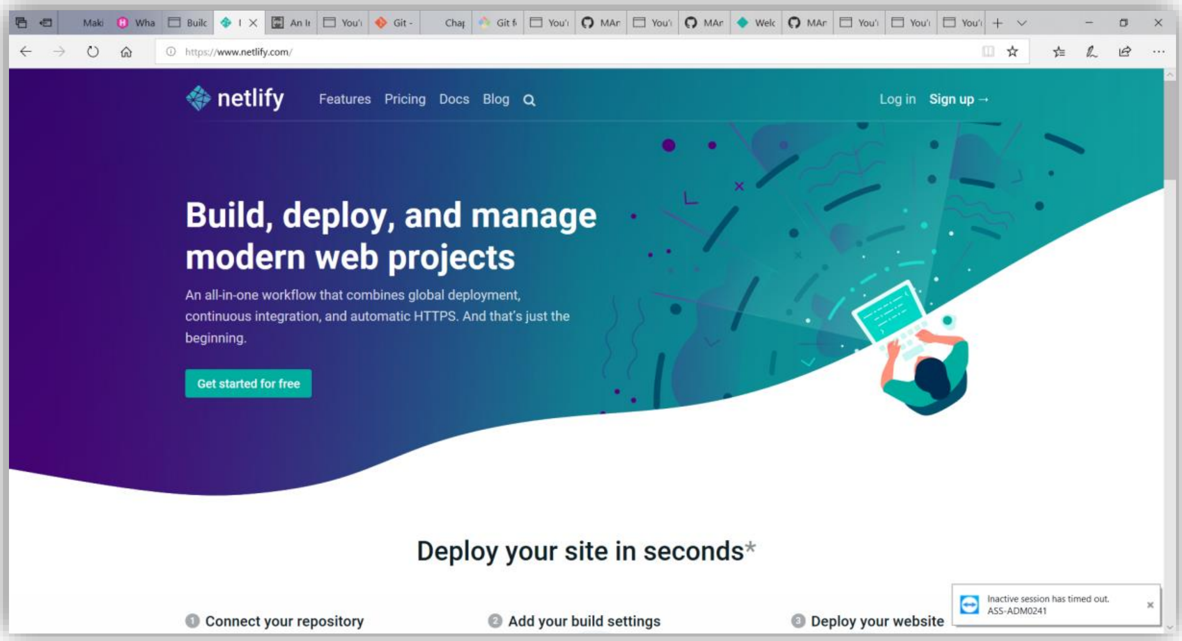
Name	Size	Modified
..		
config.toml	1.9 KB	Feb 11, 201
languages.toml	549 B	Feb 11, 201
menus.toml	830 B	Feb 11, 201
params.toml	5.4 KB	Feb 11, 201

But remember that every time you make any changes, you have to carry out step 5(xi) to re-build the website. After the website has been built successfully, you then go to the 'Desktop GitHub' software to push the changes onto your GitHub account (i.e. update the "myWebsite" repo*) using step 4(ix). Note that it is "myWebsite"* repo *that you are going to be deploying repeatedly as your actual website.*

7. Deploying your website

At this point, you can set up a Netlify account (it's free!). Through Netlify you will be able to connect your *"myWebsite"* repo and deploy it as a live website. This part is very easy. The *step-by-step* of how to do this can be found here: https://www.netlify.com/blog/2016/09/29/a-step-by-step-guide-deploying-on-netlify/. At first, Netlify will use the 'public' folder to serve your website (i.e. you will have something like *something-something.netlify.com*). Note: you will also have to specify your Hugo version in the *Environmental Variables* section (see step 5(ix)). Also note that a part of connecting your *"myWebsite"* repo include editing the 'baseurl = "/"' line of the *config.toml* file to baseurl = *"something-something.netlify.com"* in order for your website to be able to go live.

When the website is finally up and running, you can create a customised domain name for a token of $9.99 per year. That is, you will have the opportunity to remove the '.netlify' from your '*something-something.netlify.com*'.



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An all-in-one workflow that combines global deployment, continuous integration, and automatic HTTPS. And that's just the beginning.

Deploy your site in seconds*

1 Connect your repository

2 Add your build settings

3 Deploy your website

Inactive session has timed out.
ASS-ADM0241

When the website is finally up and running, you can create a customised domain name for a token of $9.99 per year. That is, you will have the opportunity to remove the '.netlify' from your '*something-something.netlify.com*'.

What next?

Congratulations!

The next thing you will be doing now is to keep repeating the following 4 steps:

(i) Edit, remove or add a files in "C:....\My Document\GitHub\myWebsite" on your local PC using **RStudio** or directly from the **window explorer**

(ii) Re-build the website in **RStudio** by clicking the 'Addins > Serve Site'

(iii) Push the changes to your "*myWebsite*" repo using the **Desktop GitHub**.

(iv) Deploy on *Netlify.com*.