

TIPS FOR CREATING AND PUBLISHING WEB SITES USING DISTILL FOR R AND GITHUB

1. DOWNLOADING RSTUDIO AND CREATING A NEW R-PROJECT

The following is based on instructions given at: [websites with distill](#).

- (1) Download the latest version of Rstudio here: [rstudio download](#).
- (2) Open Rstudio and install the distill package by typing “install.packages(“distill”)”
- (3) In Rstudio, select “File/New Project/New Directory/Distill Website” (you will need to scroll down a bit). Enter a directory name, say “MyCoolWebsite”, and a file path under “create project as subdirectory of”, say `c:\webDesign` (make sure this folder already exists ...). Enter a Title - e.g. “KM start”. **IMPORTANT: select the box: “customize for GitHub pages”**. Select “create project.”

This will open three tabs in Rstudio: “index.Rmd,” “about.Rmd,” and `_site.yml`. The first two are your first web pages, the third is the navigation file that shows how all these pages are linked. You can immediately take a first look at your new web site by selecting “Build” in the upper menu bar to the RIGHT, and “Build website.” You can repeat this everytime you change something in your local web environment.

If you look in the lower right hand window, you can see that Rstudio created a “docs” folder that now includes all your translated html files. This is the folder you can ultimately link to a web service for publishing, as described below.

2. CUSTOMIZING YOUR WEB SITE

2.1. The `_site.yml` navigation file. Your `_site.yml` file shows the general outline of your web environment, such as all of YOUR web pages that are linked to your home page. To avoid issues publishing your site in GitHub, make sure output directory is set to: `output_dir: “.”` as mentioned before.

After adding a few linked pages and drop-down menus, my “`_site.yml`” file currently looks like this:

```
index.Rmd x footer.html x aaec5126.Rmd x aaec6564.Rmd x aaec6524.Rmd x _site.yml x resources.Rmd x styles.css x
1 name: "KMDistill"
2 title: "Klaus Moeltner"
3 base_url: https://www.faculty.agecon.vt.edu
4- description: |
5   Klaus Moeltner
6 output_dir: "_site"
7 navbar:
8   #logo:
9- # image: images/VTlogo2017.pdf
10- right:
11-   - text: "Home"
12     href: index.html
13-   - text: "CV"
14     href: CVs/moeltner_CV_Oct7_2019.pdf
15-   - text: "Courses"
16-     menu:|
17-       - text: "Empirical Economics II (AAEC/ECON 5126)"
18         href: aaec5126.html
19-       - text: "Bayesian Econometric Analysis (AAEC/ECON/STAT 6564)"
20         href: aaec6564.html
21-       - text: "Env. Econ. Theory and Policy (AAEC 6524)"
22         href: aaec6524.html
23-   - text: "Research"
24-     menu:
25-       - text: "project 1"
26-       - text: "project 2"
27-       - text: "project 3"
28-   - text: "Resources"
29     href: resources.html
30- output:
31-   distill::distill_article:
32     css: styles.css
33
34
35
```

2.2. **The styles.css style file.** As shown in the last line of `_site.yml`, I added my own style file “`styles.css`” to modify the default theme. To create this style file in RStudio, I chose “File/new text file” and saved it to my root folder (here: “MyCoolWebsite”) with the `.css` suffix. Here is what mine looks like at this point:

```
index.Rmd x  _footer.html x  aaec5126.Rmd x  aaec6564.Rmd x  aaec6524.Rmd x  _site.yml x  resources.Rmd x  styles.css* x
1  /* the following applies to non-linked text in the navigation bar */
2  /* also sets color of header and footer bars */
3  .distill-site-nav {
4  color: rgba(255, 255, 255, 1); /* sets the color of text 255 for all ==white*/
5  /* color: lightgray; */
6  background-color: maroon; /*sets the color of background; maroon = Hokie color*/
7  /* background-color: #455a64; */
8  font-size: 15px;
9  font-weight: 300;
10 }
11 /* the following applies to hyperlinked text in the navigation bar */
12 .distill-site-nav a {
13 color: inherit;
14 text-decoration: none;
15 /*text-decoration: underline;*/ /* underlines text in main menu bar */
16 }
17 /* this gives the change in font color as you hover over it with the cursor
18 but only if it has a hyperlink!*/
19 .distill-site-nav a:hover {
20 color: coral; /* coral = hokie orange, about - see CSS color codes web site */
21 }
22 /* this would add additional styling to the header alone */
23 .distill-site-header {
24 }
25 /* this would add additional styling to the footer alone */
26 .distill-site-footer {
27 }
28 @media print {
29 .distill-site-nav {
30 display: none;
31 }
32 }
33 /* This changes the text color etc of the drop-down menu*/
34 .nav-dropdown-content a, .nav-dropdown-content .nav-dropdown-header {
35 color: black;
36 padding: 6px 24px;
37 text-decoration: none;
38 display: block;
39 text-align: left;
40 }
41 /* the following changes color etc. for all links in the main body when mouse is over them */
42 a:hover {
43 color: coral; /* coral = hokie orange, about - see CSS color codes web site */
44 }
45
```

You may want to experiment with additional styling. I found the following web sites helpful:
color codes for CSS: [CSS colors](#)

CSS reference guide: <https://www.w3schools.com/cssref/default.asp> CSS reference

2.3. Creating and filling web pages. Initially, you will have two pages by default, your home page, called “index.Rmd” (never rename that one!!!), and an “about” page which you can delete, rename, or fill / edit. Both files will have a default title section and a bit of R Knit-r code - essentially the same as Sweave, in case you want to add actual R code. You can edit the title section as needed, and ignore or delete the Knit-r stuff.


Basically, each page is an individual “markdown” file, that can combine a variety of different elements into a unified document. Here are some helpful web sites for filling / editing markdown pages:

Markdown cheatsheet [markdown cheatsheet](#)

Similar: [more markdown tips](#)

This is what my index.Rmd file looks like at this point:

```
index.Rmd* x _footer.html x aaec5126.Rmd x aaec6564.Rmd x aaec6524.Rmd x _site.yml x resources.Rmd x styles.css* x
1 ---
2 title: "Klaus Moeltner"
3 description: |
4   Professor
5   Department of Agricultural and Applied Economics
6   Virginia Tech
7   cell: (775) 560-3288
8   e-mail: moeltner@vt.edu
9 site: distill::distill_website
10 ---
11
12 <!-- a few notes to myself:
13 1) note the symbol to comment out text -use it precisely.
14 It's html language.
15 2) This is a markdown document as noted in
16 https://sachsmc.github.io/knit-git-markr-guide/knitr/knit.html
17 it also included knitr code ``` [stuff] ``` - see same tutorial
18 Note that the tutorial also has a link to its source code - handy!
19 3) Don't insert anything above the "title" stuff - it will show as some
20 "index" text on the web site
21 the --- above call all pandoc parameters -->
22
23
24 ```{r setup, include=FALSE}
25 knitr::opts_chunk$set(echo = FALSE)
26 ```
27
28 |
29 ![Maria Luggau, Austria](images/luggau.jpg)
```



If you want links in your web pages to images, you need to first create an “images” folder in your root directory. Place all images in there (jpg is OK, other formats probably as well). Then reference the image in the body of your page script as “[image label](images/imagenname.jpg).” Similarly for any other linked file, create a “files” folder in your root directory (here you have flexibility in labeling), and put the files in there. For example, I created a “CVs” folder that will contain my current CV. I could then directly call it in the body of a page script as **[**CV**](CVs/moeltnerCurrentCV.pdf)** (The **** **** give boldface). In my case I preferred to link my CV directly in the main menu bar. This requires a direct insert in your `_site.yml` file:

```
- text: "CV"
  href: CVs/moeltner_CV_Oct7_2019.pdf
```

If you want to add a footer area to your pages, you need to create a separate “footer.html” file by selecting File/New File/R HTML. Place this file also into your root directory. For my footer, I just added a few links to different web pages:

```
[Department faculty page] (https://aaec.vt.edu/people/faculty/moeltner-klaus.html)
&nbsp; <!-- adds a tab -->
&nbsp;
[Global Change Center page] (https://www.globalchange.vt.edu/dr-klaus-moeltner/)
&nbsp;
&nbsp;
[Coastal @ VT page] (https://fralin.vt.edu/Centers/coastal.html)
```

My full folder environment at this point (note: `.Rhistory` and `.Rproj.user` are automatically generated when you create your new project):

Files Plots Packages Help Viewer			
<input type="checkbox"/> New Folder <input type="checkbox"/> Delete <input type="checkbox"/> Rename <input type="checkbox"/> More ▾			
<input type="checkbox"/> > C: > Klaus > klausweb > KMDistill			
	▲ Name	Size	Modified
	..		
<input type="checkbox"/>	.Rhistory	0 B	Nov 20, 2019, 8:51 AM
<input type="checkbox"/>	.Rproj.user		
<input type="checkbox"/>	_footer.html	289 B	Nov 19, 2019, 9:47 AM
<input type="checkbox"/>	_site		
<input type="checkbox"/>	_site.yml	874 B	Nov 20, 2019, 8:09 AM
<input type="checkbox"/>	aaec5126.Rmd	157 B	Nov 19, 2019, 9:56 AM
<input type="checkbox"/>	aaec6524.Rmd	166 B	Nov 18, 2019, 3:57 PM
<input type="checkbox"/>	AAEC6564		
<input type="checkbox"/>	aaec6564.Rmd	690 B	Nov 19, 2019, 12:48 PM
<input type="checkbox"/>	about.Rmd	172 B	Nov 18, 2019, 2:06 PM
<input type="checkbox"/>	courses.Rmd	153 B	Nov 18, 2019, 3:50 PM
<input type="checkbox"/>	CVs		
<input type="checkbox"/>	images		
<input type="checkbox"/>	index.Rmd	960 B	Nov 21, 2019, 9:38 AM
<input type="checkbox"/>	KMDistill.Rproj	240 B	Nov 20, 2019, 3:26 PM
<input type="checkbox"/>	resources.Rmd	976 B	Nov 20, 2019, 8:28 AM
<input type="checkbox"/>	styles.css	1.5 KB	Nov 20, 2019, 3:41 PM

3. PUBLISHING YOUR WEB SITE

Note: this follows the instruction given at [publish at Github](#).

- (1) In your `_site.yml` file, make sure output directory is set to: `output_dir: “.”` as mentioned before.
- (2) Create a new account at [github.com](#).
- (3) Download GitHub, whichever version fits your PC. I have “Github for desktop.”
- (4) Sign in with the user name and password you created in step (1). (OK to acknowledge the “commit” message).
- (5) On the “Let’s get started” page, select “create repository on your hard drive”. For “name,” enter `username.github.io`, where “username” is exactly the user name you chose when you created your GitHub account. Under “local path” choose an empty folder, perhaps also in your “webDesign” folder, so right next to the “MyCoolWebsite” folder. Let’s call it “GitHubStuff” for now. Leave everything else as-is and click “Create Repository.” This will create a new folder called “username.github.io” under your “GitHubStuff” folder.
- (6) Now copy all files from your “MyCoolWebsite” folder to the “username.github.io” folder.
- (7) When you click on the Github, you should now see all your files. Add a few words under “Summary” (i.e. “my first commit”), and click “commit” (this just means you are happy with all the files currently in your repository). All your files will disappear - that’s OK.
- (8) Click the “publish repository” button in the top menu bar of the Github interface. (you may be prompted to sign in again). In the “publish repository” dialog window, de-select “keep this code private.” Click “publish repository.”
- (9) You can now view all your files in the actual Github repository at `https://github.com/username/username.github.io` if you wish (click on “View on Github” in the right pane of the Github app).
- (10) More importantly, your new web site should now be visible at `https://username.github.io` (just type “username.github.io” in a new browser window).

4. EDITING YOUR WEB SITE

- (1) Make any changes and edits to your web environment in Rstudio - this will change things in your local “MyCoolWebsite” folder.
- (2) Copy all changed files / elements to your “username.github.io” folder.
- (3) Open the Github app / program. Sign in if prompted. You should see the new file(s) in the left bar.
- (4) Click “Commit to master” as before. Then “push origin” in the right pane.

5. DELETING YOUR GITHUB REPOSITORY

If you need to make a fresh start or no longer want your stuff on GitHub, you can go to `https://github.com/username/username.github.io`, Settings/ scroll down to “Danger Zone”, “Delete this repository.”