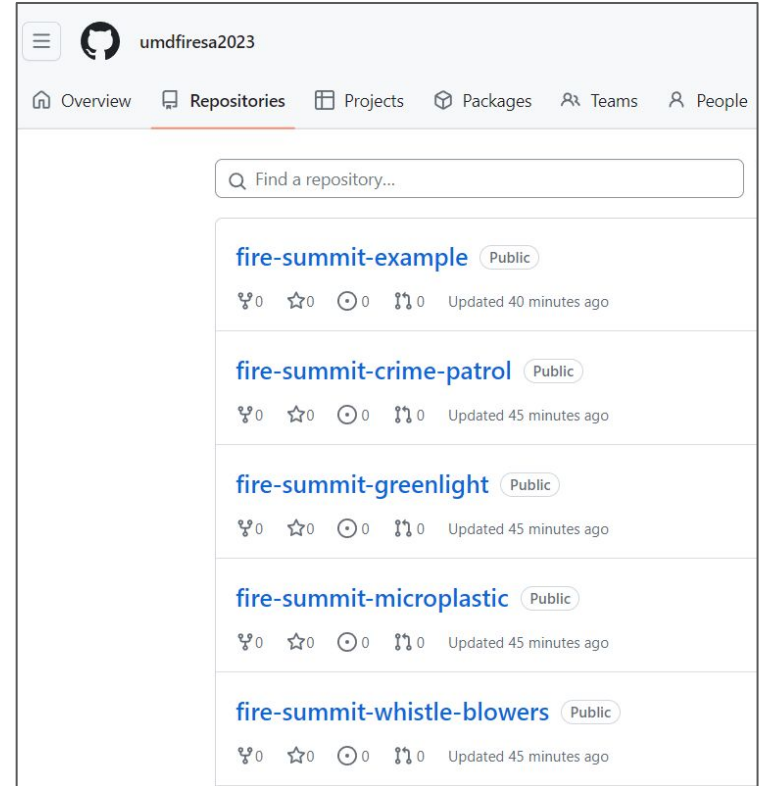# FIRE: THE FIRST-YEAR INNOVATION & RESEARCH EXPERIENCE

SUSTAINABILITY ANALYTICS

How to Create a GitHub-Flavored Markdown Webpage with Quarto
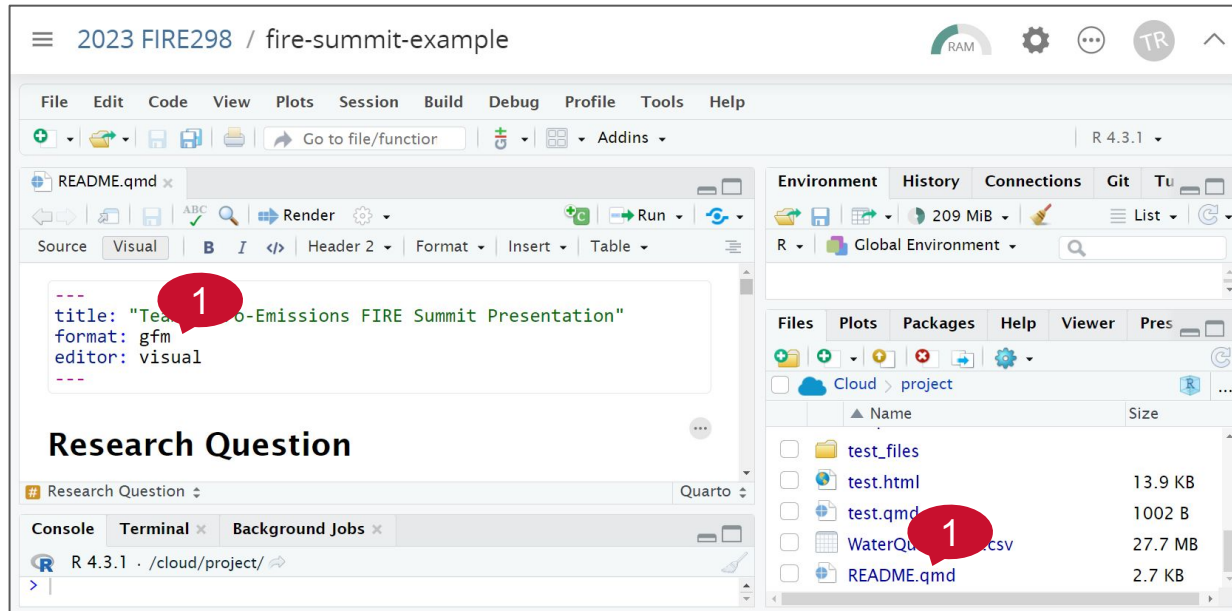
Step 1: Clone GitHub Template into Posit Cloud

1. Find the repository **fire-summit-team-name** in GitHub

2. Copy the repository's HTTPS

3. Clone the repository into the **2023 FIRE298 Workspace** in posit.cloud

Step 2: Open Markdown File and Start Editing

1. Click on README.qmd. Note that the format of this document is gfm.

2. Start filling out the document

Step 3: Upload files that you would like to showcase

1. Upload data and images that you would like to include. Make sure that each file does not exceed 100 MB (the smaller the better).

Tip 1: Showcase only iteration in one loop

```r
{r}
#for (i in 1:length(f)) {
#   print(f[i])
#r<-rast(paste0("G:/Shared drives/2023 FIRE-SA/FALL OUTPUT/Team Microplastic
/NASA_output_data/",f[i]))

r<-rast("201001.nc4")
rp<-project(r, crs(cmd))

Evap_tavg_va<-extract(rp[[1]],cva,fun="mean",na.rm=TRUE)
Evap_tavg_md<-extract(rp[[1]],cmd,fun="mean",na.rm=TRUE)

Qs_tavg_va<-extract(rp[[9]],cva,fun="mean",na.rm=TRUE)
Qs_tavg_md<-extract(rp[[9]],cmd,fun="mean",na.rm=TRUE)

Rainf_f_tavg_va<-extract(rp[[12]],cva,fun="mean",na.rm=TRUE)
Rainf_f_tavg_md<-extract(rp[[12]],cmd,fun="mean",na.rm=TRUE)

Tair_f_tavg_va<-extract(rp[[19]],cva,fun="mean",na.rm=TRUE)
Tair_f_tavg_md<-extract(rp[[19]],cmd,fun="mean",na.rm=TRUE)

va<-data.frame(NAME10=cva$NAME10,
               NAMELSAD10=cva$NAMELSAD10,
               Evap_tavg=Evap_tavg_va$Evap_tavg,
               Qs_tavg=Qs_tavg_va$Qs_tavg,
               Rainf_f_tavg=Rainf_f_tavg_va$Rainf_f_tavg,
               Tair_f_tavg=Tair_f_tavg_va$Tair_f_tavg)
               #Tair_f_tavg=Tair_f_tavg_va$Tair_f_tavg,
               #file=f[i])
```

Tip 2: Show an example of a dataframe with head()

An example of control variables from January 2010 in Maryland is shown below.

```
head(md)
```

```
       NAME10         NAMELSAD10    Evap_tavg       Qs_tavg  Rainf_f_tavg
1   Worcester   Worcester County  1.402706e-05  6.656126e-06  3.811770e-05
2     Harford     Harford County  1.438178e-05  3.877095e-06  3.511265e-05
3  Montgomery  Montgomery County  1.093989e-05  2.293109e-06  2.710311e-05
4  Washington  Washington County  1.659733e-05  5.653316e-06  3.779316e-05
5     Carroll     Carroll County  1.466791e-05  1.895020e-06  3.017357e-05
6  St. Mary's  St. Mary's County  1.558496e-05  6.449214e-06  4.059291e-05
```

Tip 3: Show a map if you can

Average evapotranspiration levels from January 2010 is shown below.

```
cmd<-vect("Shapefiles/tl_2020_24_county10.shp")
cva<-vect("Shapefiles/tl_2020_51_county10.shp")

r<-rast("201001.nc4")
rp<-project(r[[1]], crs(cmd))

plot(rp)
plot(cmd, add=TRUE)
plot(cva, add=TRUE)
```
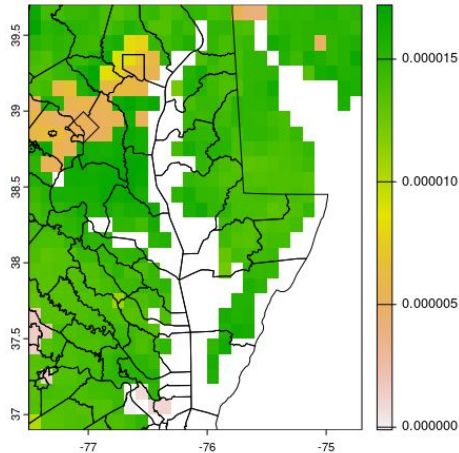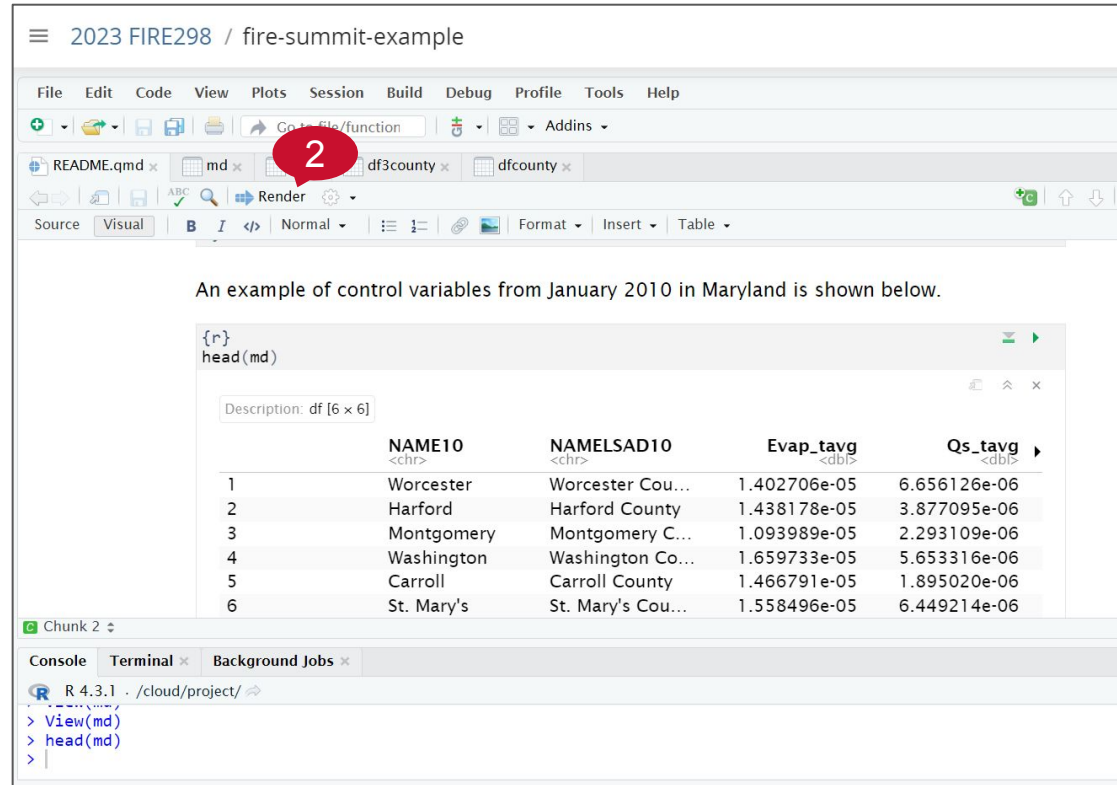
Step 4: Render the file

1. After everyone in the team has finished their part. Combine everything into the README.qmd file.
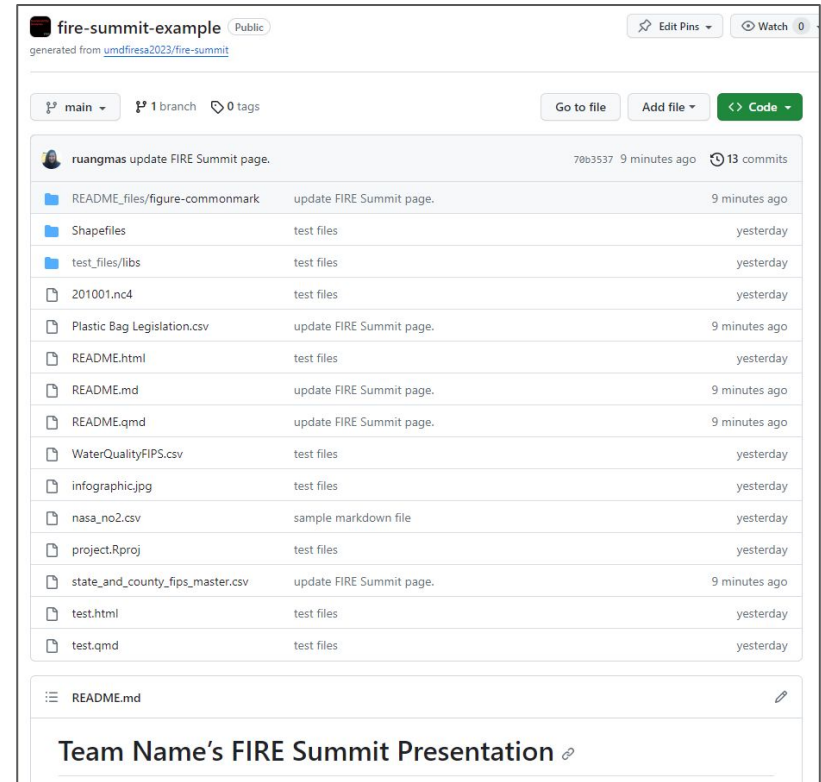
2. Render the file.

Step 5: Push the file to GitHub to publish the page

1. Check each file that you have updated and Click Commit.

2. Type in a Commit message and Click Commit in the pop-up window.

3. Click Push.

4. Type in your GitHub username and Token.
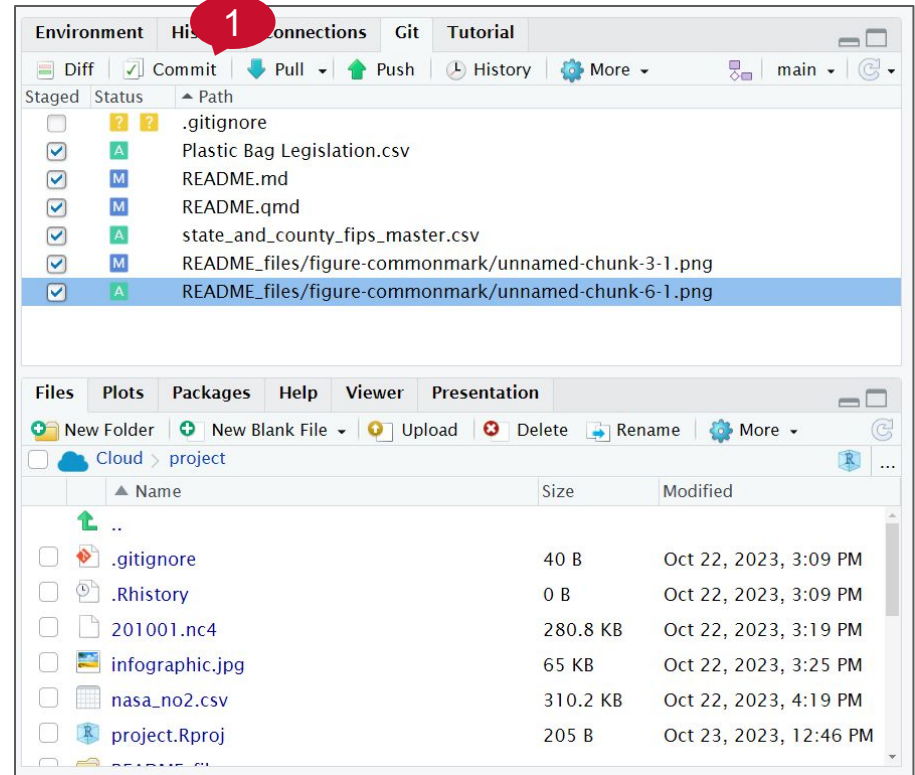
Step 6: Check your work

- Go to your repository on GitHub and make sure that everything is published.

- You can modify the page as many times as you like by updating README.qmd, rendering it, and pushing it to GitHub.