

MGT 100 CUSTOMER ANALYTICS



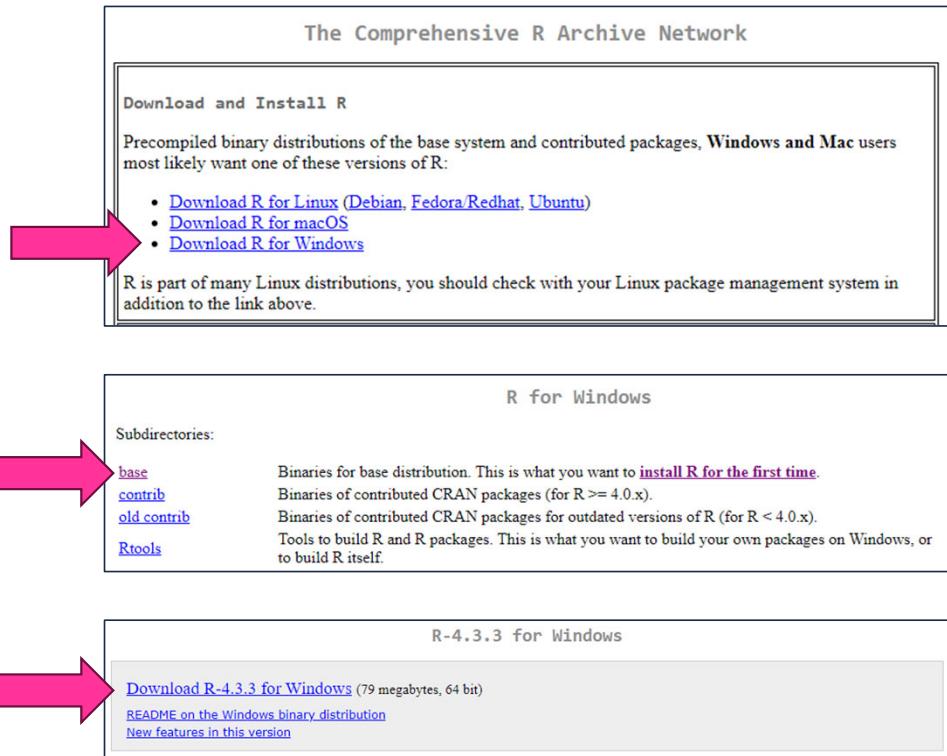
RMD CV + Quarto Website (Windows Instructions)

PROF DAN YAVORSKY
Winter 2024

R LANGUAGE

Download and Install R from CRAN

<https://cran.r-project.org/>



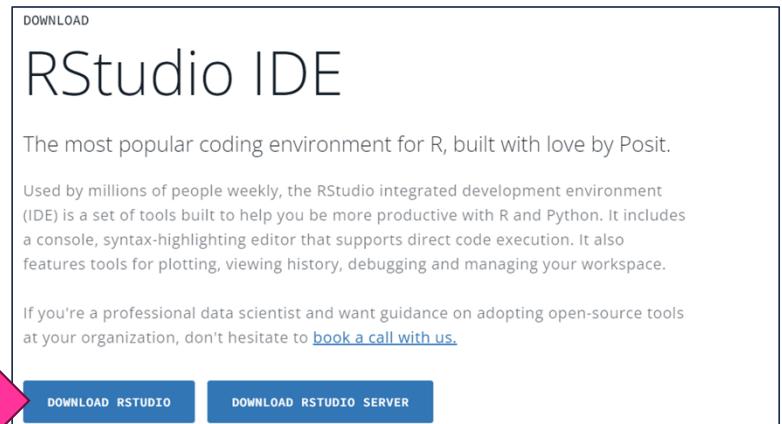
RSTUDIO

Download and Install RStudio from Posit

<https://posit.co/>



The screenshot shows the Posit Connect homepage. At the top right, there is a blue button labeled "DOWNLOAD RSTUDIO". A large pink arrow points to this button. Below the button, the text "Put data into production with Posit Connect" is displayed in large, bold, dark blue font. Underneath, there is a smaller text block describing the features of Posit Connect, followed by a photograph of a person working at a computer displaying various data plots.



The screenshot shows the RStudio IDE landing page. At the top left, there is a "DOWNLOAD" button. A pink arrow points to this button. Below it, the text "RStudio IDE" is displayed in large, bold, dark blue font. Underneath, there is a smaller text block describing the RStudio IDE, followed by a photograph of a person working at a computer displaying various data plots. At the bottom, there are two blue buttons: "DOWNLOAD RSTUDIO" and "DOWNLOAD RSTUDIO SERVER".



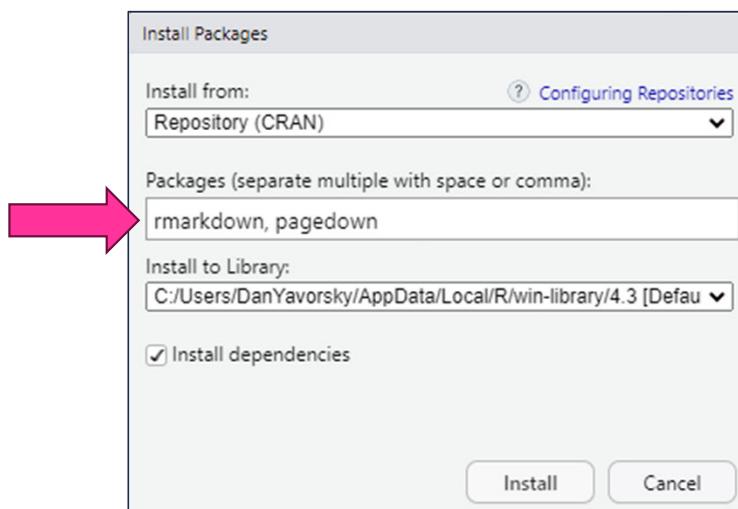
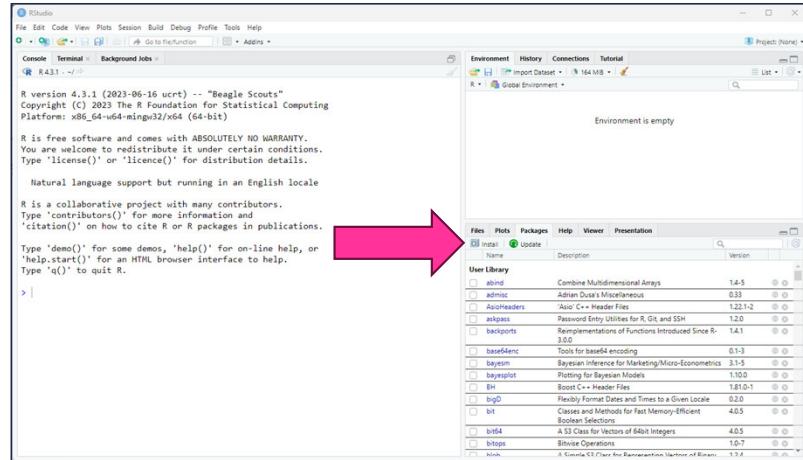
The screenshot shows the RStudio Desktop download page. It is divided into two main sections: "1: Install R" on the left and "2: Install RStudio" on the right. In the "1: Install R" section, there is a blue button labeled "DOWNLOAD AND INSTALL R". In the "2: Install RStudio" section, there is a blue button labeled "DOWNLOAD RSTUDIO DESKTOP FOR WINDOWS". A pink arrow points from the "1: Install R" section towards the "2: Install RStudio" section. Below the "2: Install RStudio" section, there is some small text about file size and version information.

RESUME VIA RMarkdown

RMARKDOWN + PAGEDOWN

Install the rmarkdown and pagedown R packages

- The rmarkdown package is a set of tools that assist with rendering source documents written in the R Markdown language into other documents formats (e.g., HTML or PDF)
- The pagedown package adds style and structure via CSS to HTML files created from R Markdown source documents, and it includes templates for resumes and other common documents

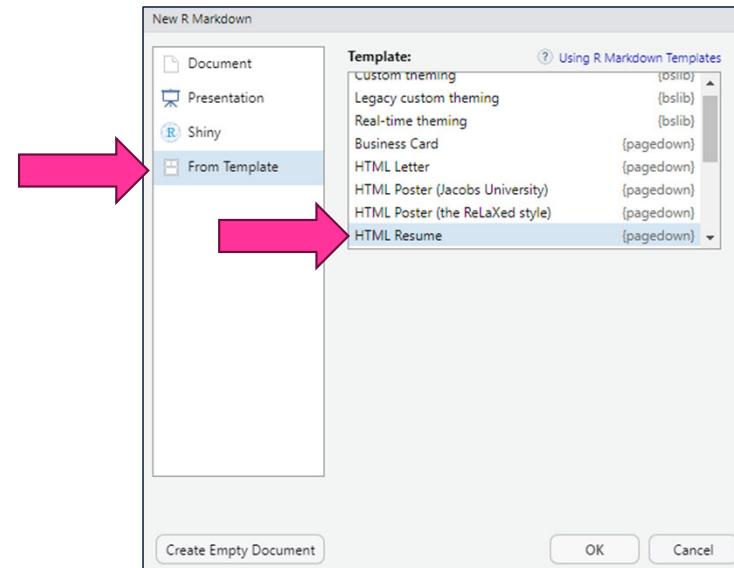
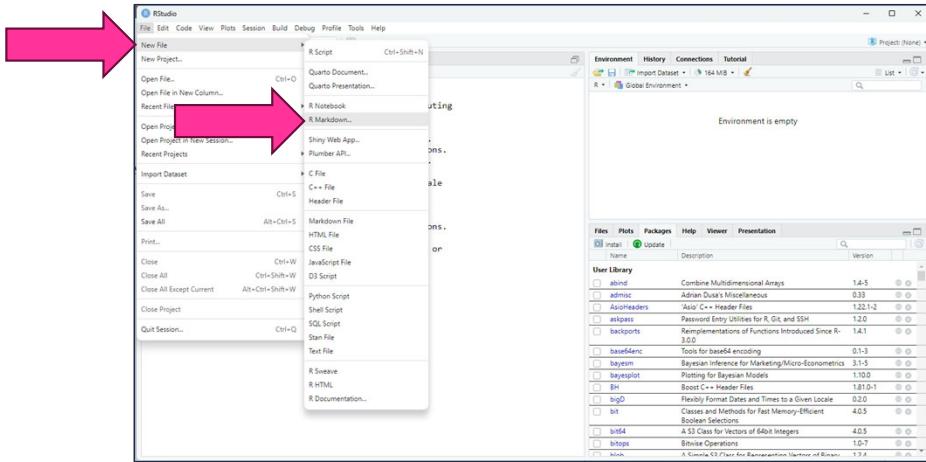


HTML RESUME TEMPLATE

Create a new R Markdown file from the **html_template**

- In RStudio, select File > New File > R Markdown
- Then choose From Template > HTML Resume

The template is filled out with a bunch of example content

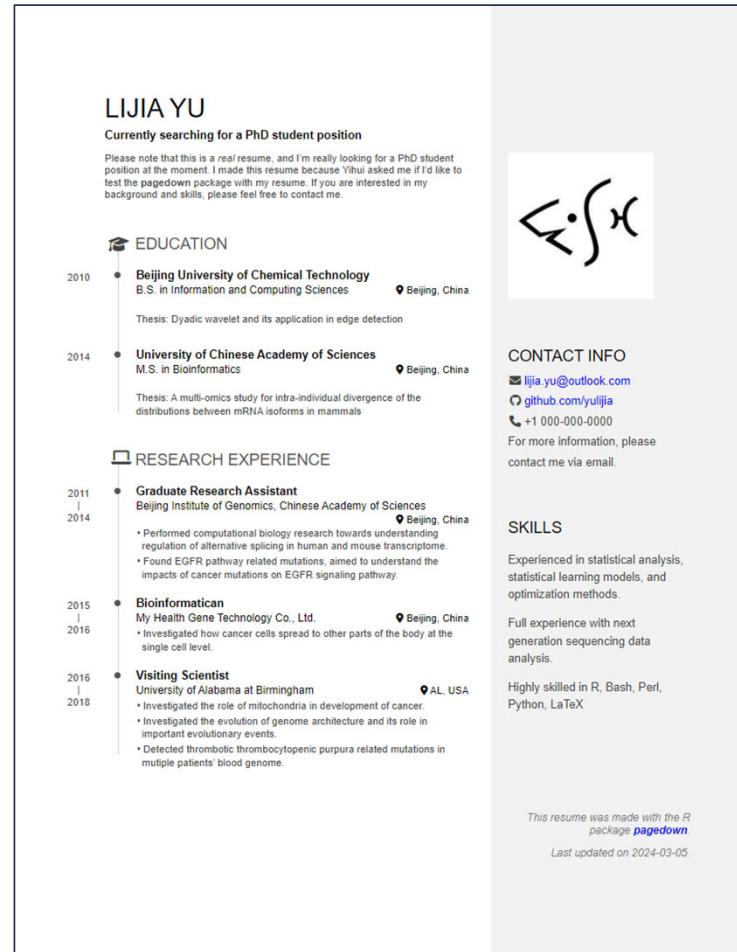


RENDER THE TEMPLATE

Click the “knit” button to render the R Markdown source document into an HTML file



```
1 ---  
2 title: "Lijia Yu's resume"  
3 author: Lijia Yu  
4 date: `r Sys.Date()`  
5 output:  
6   pagedown::html_resume  
7     # set it to true for a self-contained HTML page but it'll take longer to render  
8     self_contained: false  
9 # uncomment this line to produce HTML and PDF in RStudio:  
10 #knit: pagedown::chrome_print  
11 ---  
12   
13 Aside  
14 ======  
15   
16   
17 ![[Lijia Yu]](https://avatars1.githubusercontent.com/u/895125?s=400&v=4){width=80%}  
18   
19 Contact Info (#contact)  
20 -----  
21   
22 - <i class="fa fa-envelope"></i> lijia.yu@outlook.com  
23 - <i class="fa fa-github"></i> github.com/yulijia(https://github.com/yulijia)  
24 - <i class="fa fa-phone"></i> +1 000-000-0000  
25 - For more information, please contact me via email.  
26   
27   
28 Skills (#skills)  
29 -----  
30   
31 - Experienced in statistical analysis, statistical learning models, and optimization methods.  
32   
33 - Full experience with next generation sequencing data analysis.  
34   
35 - Highly skilled in R, Bash, Perl, Python, LaTeX  
121 (Top Level) 1 Copilot: No completions available. R Markdown.c
```



LIJIA YU
Currently searching for a PhD student position
Please note that this is a real resume, and I'm really looking for a PhD student position at the moment. I made this resume because Yihui asked me if I'd like to test the pagedown package with my resume. If you are interested in my background and skills, please feel free to contact me.

EDUCATION

- Beijing University of Chemical Technology
B.S. in Information and Computing Sciences
Beijing, China
Thesis: Dyadic wavelet and its application in edge detection
- University of Chinese Academy of Sciences
M.S. in Bioinformatics
Beijing, China
Thesis: A multi-omics study for intra-individual divergence of the distributions between mRNA isoforms in mammals

RESEARCH EXPERIENCE

- Graduate Research Assistant
Beijing Institute of Genomics, Chinese Academy of Sciences
Beijing, China
• Performed computational biology research towards understanding regulation of alternative splicing in human and mouse transcriptome.
• Found EGFR pathway related mutations, aimed to understand the impacts of cancer mutations on EGFR signaling pathway.
- Bioinformatician
My Health Gene Technology Co., Ltd.
Beijing, China
• Investigated how cancer cells spread to other parts of the body at the single cell level.
- Visiting Scientist
University of Alabama at Birmingham
AL, USA
• Investigated the role of mitochondria in development of cancer.
• Investigated the evolution of genome architecture and its role in important evolutionary events.
• Detected thrombotic thrombocytopenic purpura related mutations in multiple patients' blood genome.

SKILLS

Experienced in statistical analysis, statistical learning models, and optimization methods.

Full experience with next generation sequencing data analysis.

Highly skilled in R, Bash, Perl, Python, LaTeX

This resume was made with the R package [pagedown](#)
Last updated on 2024-03-05

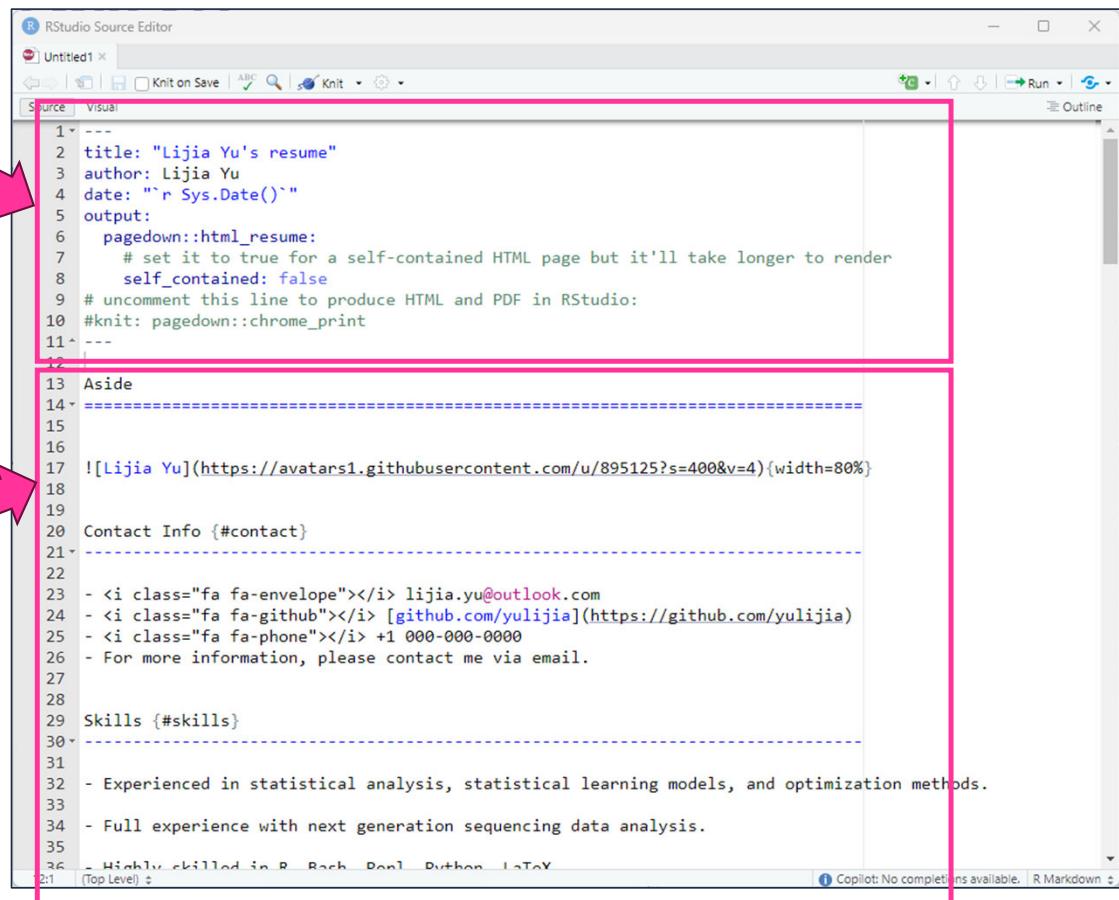
EDIT THE TEMPLATE

The part at the top is the YAML header

- Replace title and author with your name
- Manually type the date or let the R code insert today's date with "`^r Sys.Date() ^`"
- Set `self_contained` to true
- Uncomment line 10 to render to pdf

Edit the rest using R Markdown syntax

- See this link for the most common syntax
https://rmarkdown.rstudio.com/authoring_basics.html
- Add or edit free Font Awesome icons
<https://fontawesome.com/icons>
- Much more info here
https://www.anabellelaurent.com/slides/rsladies_pagedown/cvwithpagedown#1



The screenshot shows the RStudio Source Editor with an untitled Rmd file. The top portion contains the YAML header:

```
1 ---  
2 title: "Lijia Yu's resume"  
3 author: Lijia Yu  
4 date: "r Sys.Date()"  
5 output:  
6   pagedown::html_resume:  
7     # set it to true for a self-contained HTML page but it'll take longer to render  
8     self_contained: false  
9 # uncomment this line to produce HTML and PDF in RStudio:  
10 #knit: pagedown::chrome_print  
11 ---  
12  
13 Aside  
14 ======
```

Below the YAML header is the R Markdown content, which includes a contact section and a skills section. Two pink arrows point from the text above to the YAML header and from the text below to the R Markdown content.

```
15  
16  
17 ![Lijia Yu](https://avatars1.githubusercontent.com/u/895125?s=400&v=4){width=80%}  
18  
19 Contact Info {#contact}  
20 -----  
21  
22 - <i class="fa fa-envelope"></i> lijia.yu@outlook.com  
23 - <i class="fa fa-github"></i> \[github.com/yulijia\](https://github.com/yulijia)  
24 - <i class="fa fa-phone"></i> +1 000-000-0000  
25 - For more information, please contact me via email.  
26  
27  
28 Skills {#skills}  
29 -----  
30  
31 - Experienced in statistical analysis, statistical learning models, and optimization methods.  
32  
33 - Full experience with next generation sequencing data analysis.  
34  
35 - Highly skilled in R, Bash, Perl, Python, LaTeX  
36
```

FINAL RESULT

DAN YAVORSKY

Analytics at GBK | Lecturer at UCLA & UCSD

I lead the Marketing Science and Analytics function alongside co-founder and professor Eric Bradlow at GBK Collective where I apply econometric, statistical, and machine learning analyses to support our consultants in solving our clients' business problems.

I also teach courses in Customer Analytics and Econometrics at the UCSD Rady and UCLA Anderson business schools.

EDUCATION

- 2020 • **PhD Quantitative Marketing**
UCLA Anderson Los Angeles, CA
- 2014 • **MBA, Management**
UCLA Anderson Los Angeles, CA
- 2012 • **CFA Charterholder**
Chartered Financial Analyst (CFA) Institute San Francisco, CA
- 2006 • **BA, Economics & Mathematics**
Claremont McKenna College Claremont, CA

PROFESSIONAL EXPERIENCE

- Present | 2022 • **Senior Vice President, Analytics**
GBK Collective Los Angeles, CA
 - Manage day-to-day operations of our analytics function, including interfacing with client and project teams, execute analysis, extending and researching analytic methodology, exploring analytic solutions to business problems, developing best practices implementing those solutions, and growing and managing the analytics team.
- 2021 | 2020 • **Manager, Advanced Analytics**
Bain & Co. Los Angeles, CA
 - Performed marketing analytics to support strategic market analysis, maximum-difference scaling, customer segmentation, perceptual mapping, and other statistical or econometric analysis.
 - Developed ecosystem of statistical and machine learning models to enable media conglomerate to value content on its streaming platforms and optimize media licensing decisions.

SKILLS

Statistics, Econometrics, Pedagogy, R, SQL, Tableau, Markdown, Latex, Aspiring user of Python, Julia, Vim

INTERESTS

Quantitative Marketing, Customer Analytics, Market Research, Causal Inference, Bayesian Methods, Structural Models of Demand, Consumer Search

PERSONAL

US Citizen; Married; Two children
Play soccer, cycle, sip bourbon, build mechanical keyboards, collect pocket knives, memorize children's books

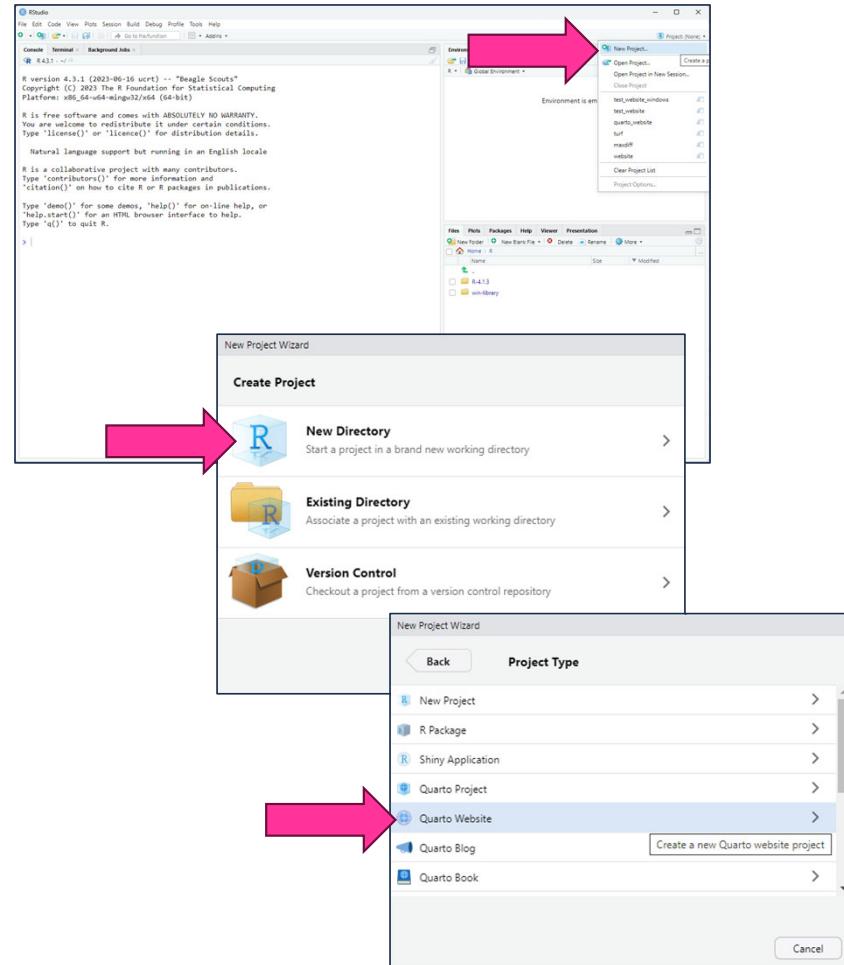
Last updated on 2023-11-29

WEBSITE VIA QUARTO

CREATE WEBSITE TEMPLATE

Create a new project in RStudio

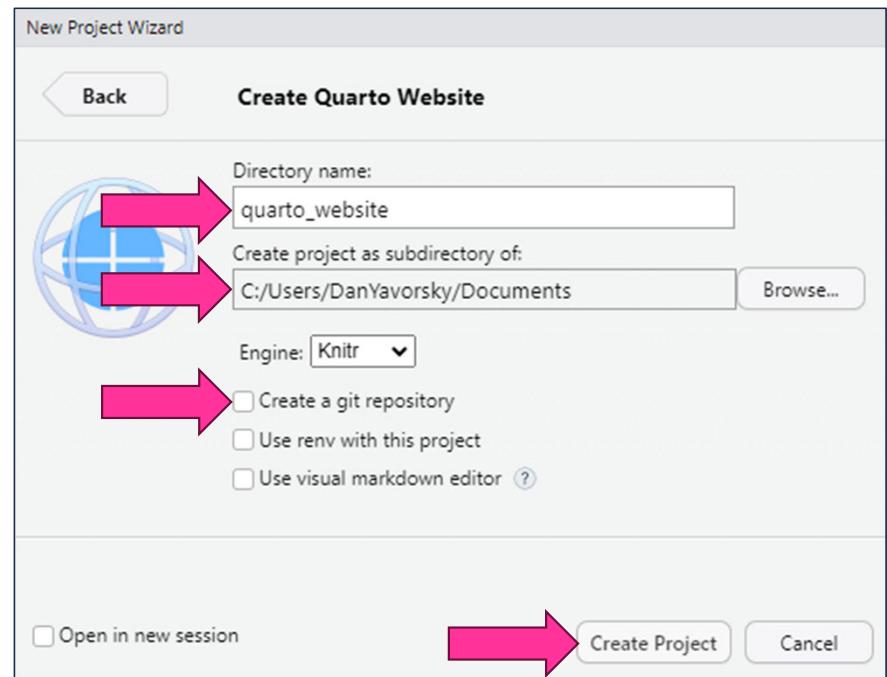
- Projects > New Project
- > New Directory
- > Quarto Website



WEBSITE TEMPLATE SETTINGS

Directory Options:

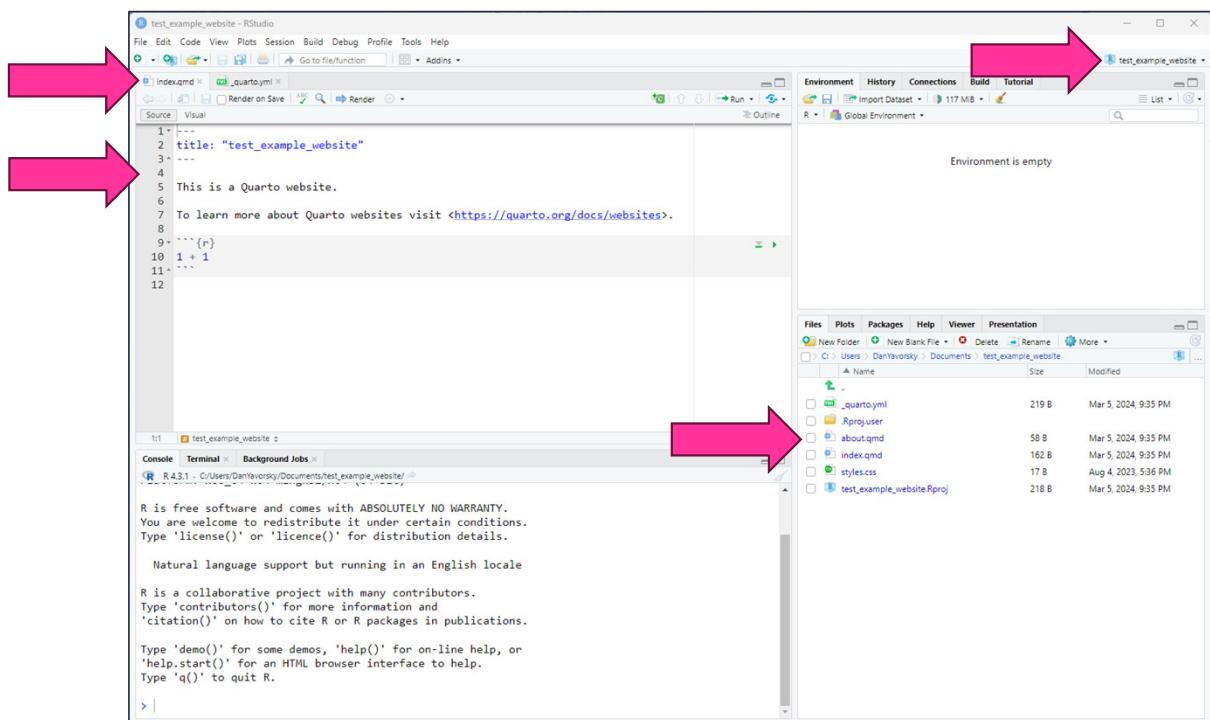
- Name your directory something like “quarto_website”
- Store your directory in a meaningful place on your computer – it’s best **not** to be backed up by a cloud service (ie, outside of Dropbox, Google Drive, or OneDrive)
- I assume you don’t have Git yet, so **uncheck** “create a git repository”
- The click “Create Project” at the bottom



WEBSITE TEMPLATE OVERVIEW

Website template:

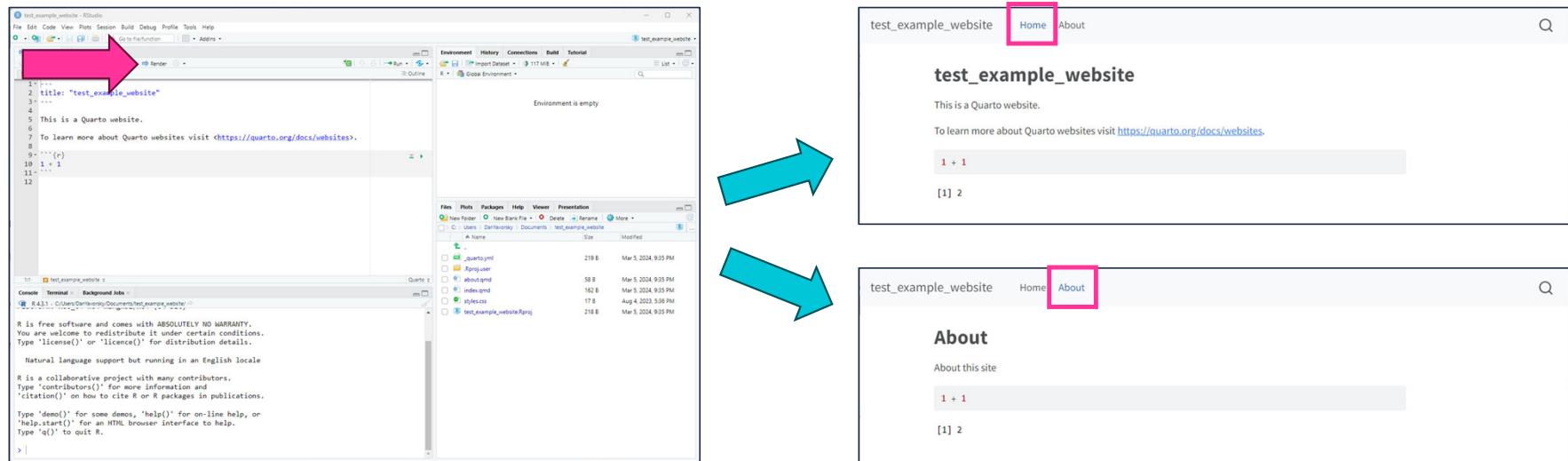
- Notice at the top-right that you're in an RStudio project
- In the “Files” pane at the bottom-right, you'll see that you have several files and one sub-directory in the newly created website directory
- Two of those files are open: `index.qmd` and `_quarto.yml`. They are pre-populated with some very basic content.



RENDER THE TEMPLATE

Click “Render”

- This converts the “source” documents (.rmd and .yml) to rendered (ie “output”) HTML files
- You now have all the files for a website on your computer; they are not available on the internet yet



PERSONALIZE YOUR “ABOUT” HOMEPAGE

Updates to `_quarto.yml`

- Line 3: add `output-dir: docs`
- Line 5: put your name or eg “Dan’s Website”
- Line 9: change “Home” to “About”
- Line 10: change “about.qmd” to “resume.qmd”

```
1 project:
2   type: website
3   output-dir: docs
4
5 website:
6   title: "Dan's Website"
7   navbar:
8     left:
9       - href: index.qmd
10      text: About
11      - resume.qmd
12
13 format:
14   html:
15     theme: cosmo
16     css: styles.css
17     toc: true
18
```

Updates to `index.qmd`

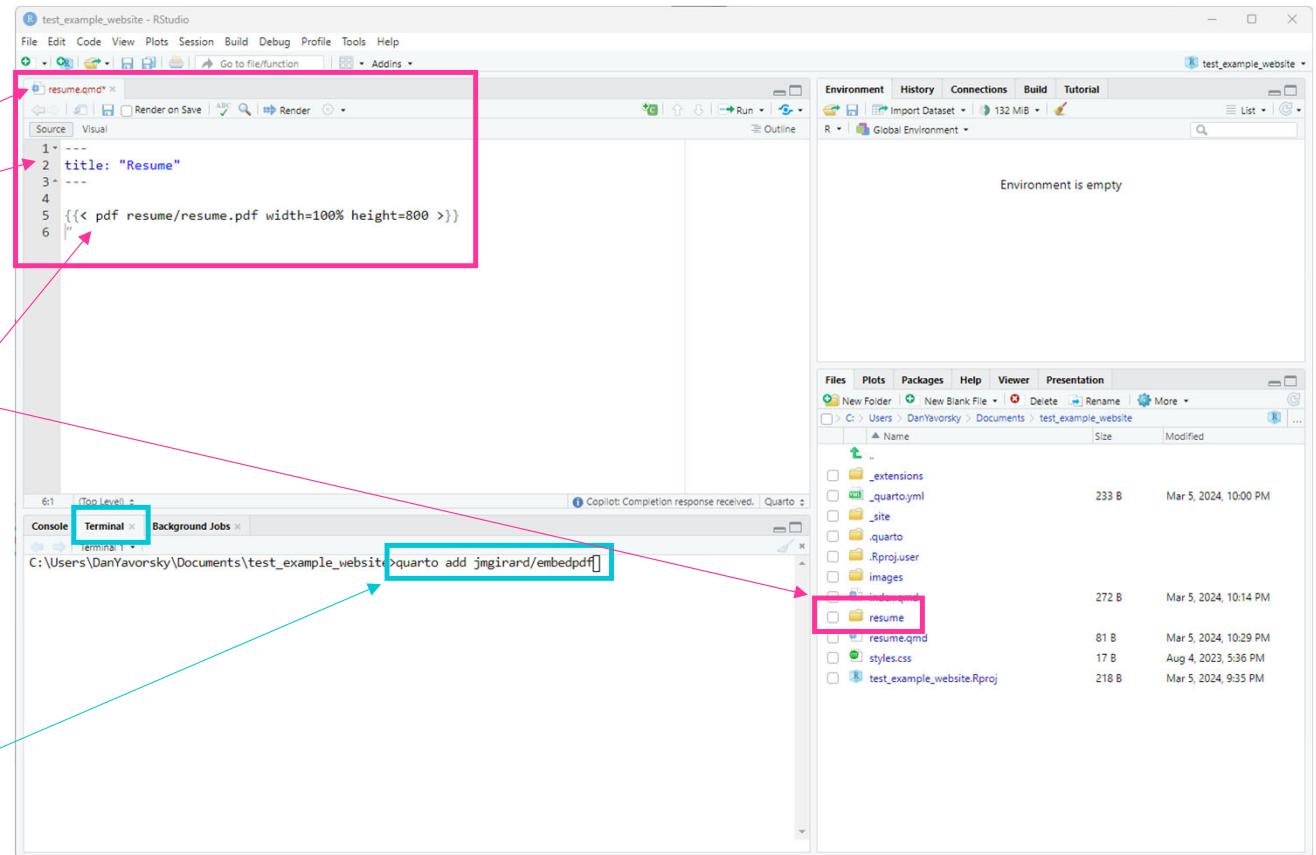
- Make your name the title
- Add an image
(also create the images subdirectory and add your picture file to it)
- Use an “about” template like Jolla
(or trestles, solana, marquee, or broadside)
More info: <https://quarto.org/docs/websites/website-about.html>
- Add some hyperlinked icons

```
1 ---
2 title: "Dan Yavorsky"
3 image: "images/profile_pic.jpg"
4 about:
5   template: jolla
6   links:
7     - icon: envelope
8       href: mailto:dyavorsky@gmail.com
9     - icon: linkedin
10      href: https://www.linkedin.com/in/dyavorsky/
11 ---
12
13 Here is a paragraph about me!
14
```

ADD YOUR RESUME

Updates to about .qmd

- Rename this file `resume.qmd`
- Update the title on line 2
- Create a subdirectory called “resume” and put your resume PDF in there
- Add this as line 5:
`{ {< pdf resume/resume.pdf width=100% height=800 >} }`



Add an extension to RStudio

- In the Terminal, run
`quarto add jmgirard/embedpdf`
- Say “Y” to the Terminal questions

VIEW RENDERED RESUME PAGE

The screenshot shows a rendered resume page for Lijia Yu. At the top, there is a navigation bar with links to "Dan's Website", "About", and "Resume". A search icon is also present. The main title is "Resume". Below the title, the file name "resume.pdf" and page "1 / 2" are displayed, along with zoom controls (75%, +, -). The resume content includes:

LIJIA YU
Currently searching for a PhD student position
Please note that this is a *real* resume, and I'm really looking for a PhD student position at the moment. I made this resume because Yihui asked me if I'd like to test the pagedown package with my resume. If you are interested in my background and skills, please feel free to contact me.

EDUCATION

- 2010 • Beijing University of Chemical Technology
B.S. in Information and Computing Sciences Beijing, China
Thesis: Dyadic wavelet and its application in edge detection
- 2014 • University of Chinese Academy of Sciences
M.S. in Bioinformatics Beijing, China
Thesis: A multi-omics study for intra-individual divergence of the distributions between mRNA isoforms in mammals

RESEARCH EXPERIENCE

- 2011 – 2014 • Graduate Research Assistant
Beijing Institute of Genomics, Chinese Academy of Sciences Beijing, China
 - Performed computational biology research towards understanding regulation of alternative splicing in human and mouse transcriptome.
 - Found EGFR pathway related mutations, aimed to understand the impacts of cancer mutations on EGFR signaling pathway.

CONTACT INFO

- ✉ lijia.yu@outlook.com
- ⌚ github.com/yulijia
- 📞 +1 000-000-0000

For more information, please contact me via email.

SKILLS

Experienced in statistical analysis, statistical learning models, and

ADD A “BLOG” TO SHOWCASE YOUR WORK

Create blog.qmd

- The “listing” part tells quarto you want a blog

```
blog.qmd x Render on Save ABC 🔎 Render
Source Visual
1 ---  
2 title: "My Projects"  
3 listing:  
4   contents: blog  
5   type: grid  
6   sort: "date desc"  
7   categories: false  
8 ---
```

Add to _quarto.yml

- Create a page/link to the blog
- This puts a link on top of webpage

```
blog.qmd x _quarto.yml x index.qmd x
project:
  type: website
  title: "Dan's Website"
  navbar:
    left:
      - href: index.qmd
        text: About
      - resume.qmd
      - href: blog.qmd
        text: Projects
  format:
    html:
      theme: cosmo
      css: styles.css
      toc: true
```

Create a subfolder called “blog”

- Add sub-sub-folders called “project1” and “project2”
- In each subfolder, create a file called “index.qmd”
- Here is example text for blog/project1/index.qmd

```
Files Plots Packages Help Viewer Presentation
rs > DanYavorsky > Documents > test_example_website > blog > project1 ...
```

```
Files Plots Packages Help Viewer Presentation
vorsky > Documents > test_example_website > blog > project1 > index.qmd ...
```

```
# This is Project 1  
## Section 1: Data  
I cleaned some data  
## Section 2: Analysis  
I analyzed the data  
```{r}  
#| message: false
library(tidyverse)
mtcars |>
 ggplot(aes(x = wt, y = mpg)) +
 geom_point()
```
```

VIEW RENDERED BLOG LISTING AND 1ST POST

Dan's Website About Resume Projects

My Projects



This is Project 1
I cleaned some data

This is Project 2
Add content

Dan's Website About Resume Projects Q

On this page

This is Project 1

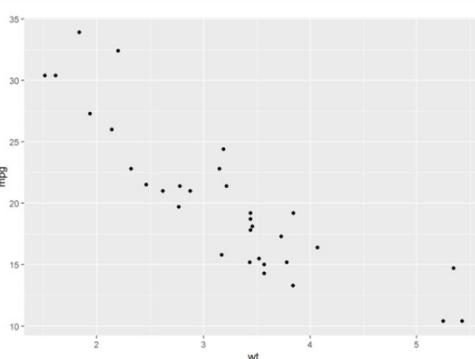
Section 1: Data

I cleaned some data

Section 2: Analysis

I analyzed the data

```
library(tidyverse)
mtcars |>
  ggplot(aes(x = wt, y = mpg)) +
  geom_point()
```



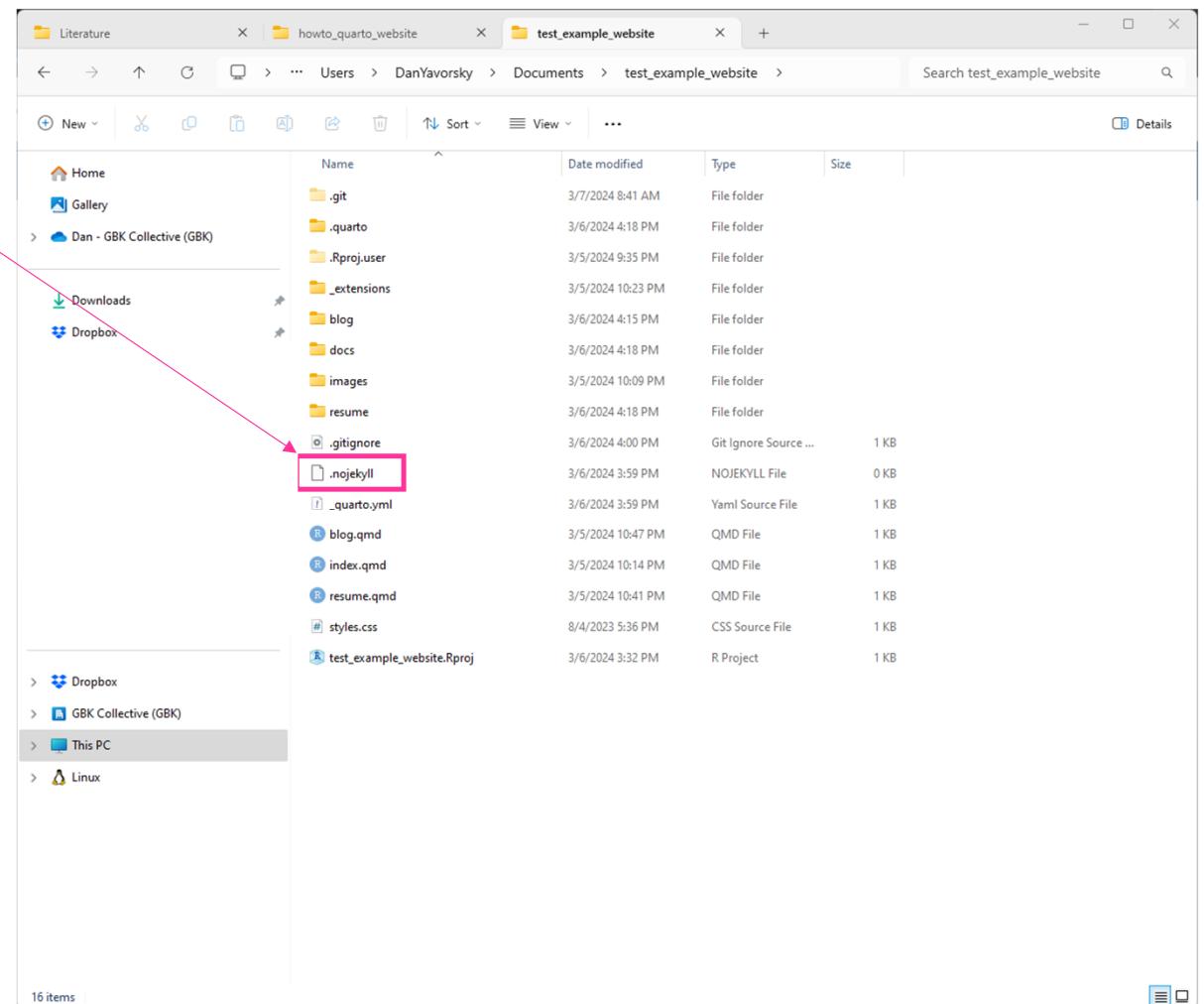
Much more info on quarto blogs here:

https://albert-rapp.de/posts/13_quarto_blog_writing_guide/13_quarto_blog_writing_guide.html

ADD ONE SPECIAL FILE

Create a file called `.nojekyll`

- This file is relevant later when we host our website on GitHub

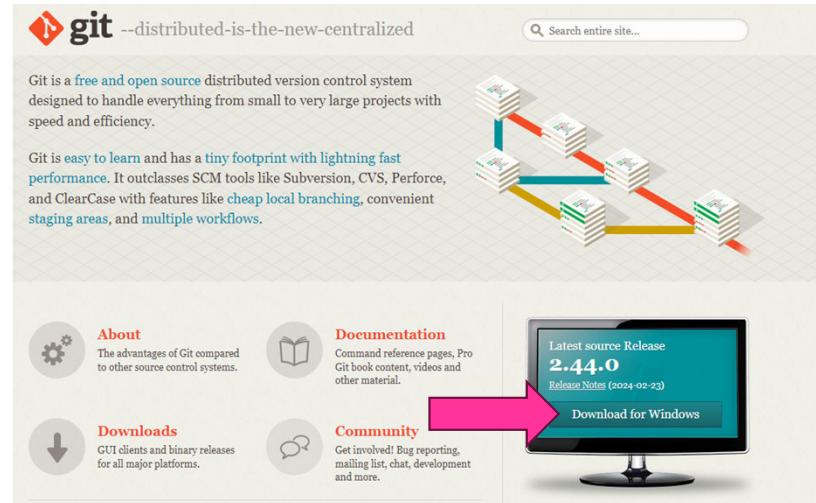


HOST WEBSITE ON GITHUB

GET GIT

Download and install Git from:
<https://git-scm.com/>

For MacOS users with homebrew, run the following at the terminal:
brew install git



Check Git is installed

- Open Terminal and run the command
git --version
 - If you see a version number, you're good to go
 - If you see a message about “git not recognized” you need to troubleshoot
- Alternatively, check if you have an application installed called Git Bash

A screenshot of a Windows PowerShell window titled "Windows PowerShell". The command "git --version" is entered, and the output shows "git version 2.44.0.windows.1". A pink arrow points to the output line.A screenshot of a Git Bash terminal window titled "MINGW64/c/Users/DanYavorsky". The command "git --version" is entered, and the output shows "git version 2.44.0.windows.1".

INTRODUCE YOURSELF TO GIT

At the Terminal, tell Git your name and email address:

```
git config --global user.name "Dan Yavorsky"
```

```
git config --global user.email dyavorsky@gmail.com
```

Run `git config --global --list` to check

The image shows two terminal windows side-by-side. The left window has two pink arrows pointing to its output. The first arrow points to the command `$ git config --global user.name "Dan Yavorsky"`. The second arrow points to the command `$ git config --global user.email "dyavorsky@gmail.com"`. The right window has one pink arrow pointing to its output, which displays the result of running `git config --global --list`. This output includes global settings like the core.editor, filter.lfs.* configurations, and the user.name and user.email settings, which are highlighted with a red box.

```
AzureAD+DanYavorsky@GBK-PC-12 MINGW64 ~
$ git config --global user.name "Dan Yavorsky"

AzureAD+DanYavorsky@GBK-PC-12 MINGW64 ~
$ git config --global user.email "dyavorsky@gmail.com"

AzureAD+DanYavorsky@GBK-PC-12 MINGW64 ~
$ |
```

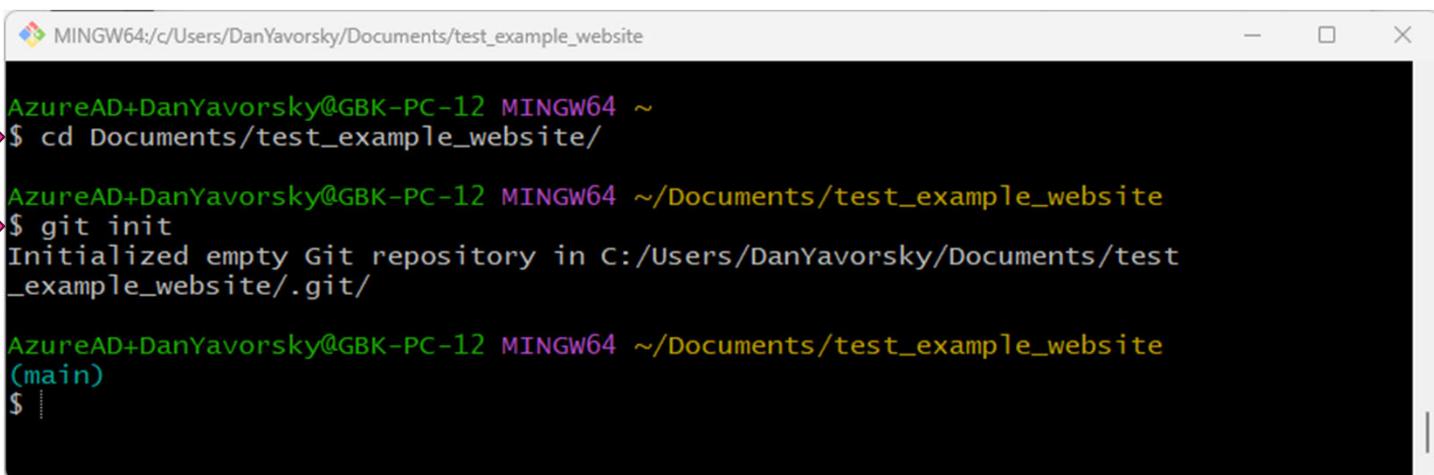
```
AzureAD+DanYavorsky@GBK-PC-12 MINGW64 ~
$ git config --global --list
core.editor="C:\Users\DanYavorsky\AppData\Local\Programs\Microsoft VS Code\bin\code" --wait
filter.lfs.smudge=git-lfs smudge -- %f
filter.lfs.process=git-lfs filter-process
filter.lfs.required=true
filter.lfs.clean=git-lfs clean -- %f
user.name=Dan Yavorsky
user.email=dyavorsky@gmail.com

AzureAD+DanYavorsky@GBK-PC-12 MINGW64 ~
$ |
```

USE GIT ON YOUR WEBSITE DIRECTORY

In the Git Bash application or RStudio Terminal

- Navigate to your website directory with
cd path/to/quarto_website/
- Initialize the directory as a
Git repository with
git init

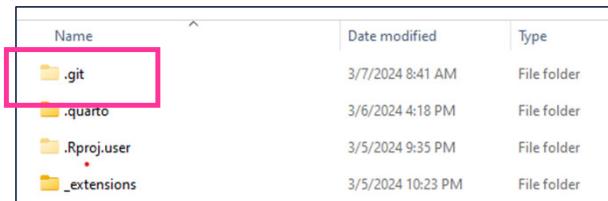


A screenshot of a terminal window titled "MINGW64:c/Users/DanYavorsky/Documents/test_example_website". The window shows the following command sequence:

```
AzureAD+DanYavorsky@GBK-PC-12 MINGW64 ~
$ cd Documents/test_example_website/
AzureAD+DanYavorsky@GBK-PC-12 MINGW64 ~/Documents/test_example_website
$ git init
Initialized empty Git repository in C:/Users/DanYavorsky/Documents/test_example_website/.git/
AzureAD+DanYavorsky@GBK-PC-12 MINGW64 ~/Documents/test_example_website
(main)
$
```

Two pink arrows point from the text above to the "cd" and "git init" commands in the terminal output.

- This creates a .git folder

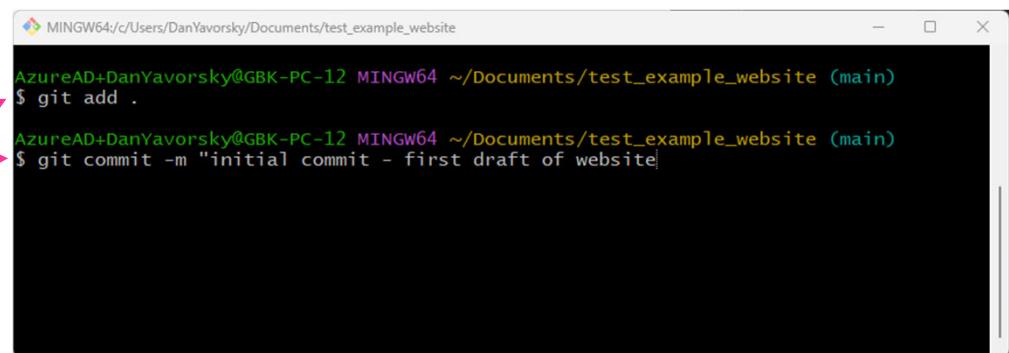


| Name | Date modified | Type |
|-------------|-------------------|-------------|
| .git | 3/7/2024 8:41 AM | File folder |
| .quarto | 3/6/2024 4:18 PM | File folder |
| .Rproj.user | 3/5/2024 9:35 PM | File folder |
| _extensions | 3/5/2024 10:23 PM | File folder |

TRACK YOUR FILES WITH GIT

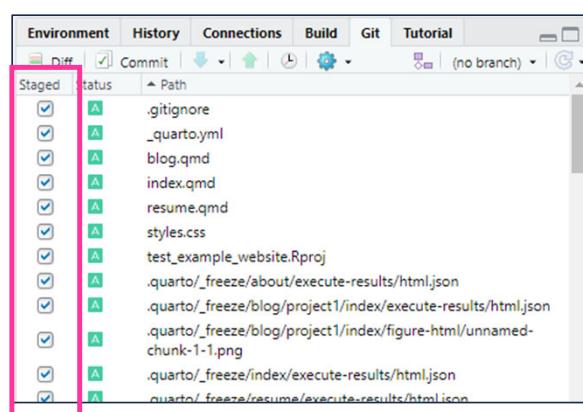
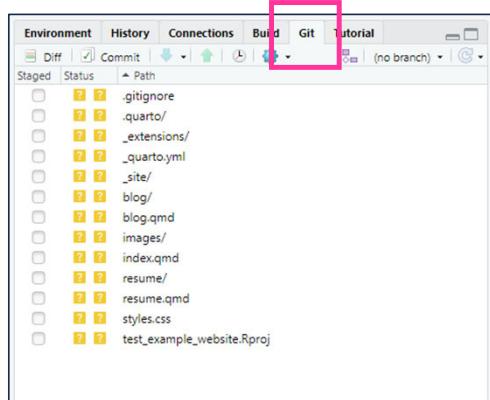
You need to “commit” your changes to Git

- You can do this at the terminal with 2 commands
git add .
git commit -m “add a message here”
- Or via RStudio with the Git tab in the top right

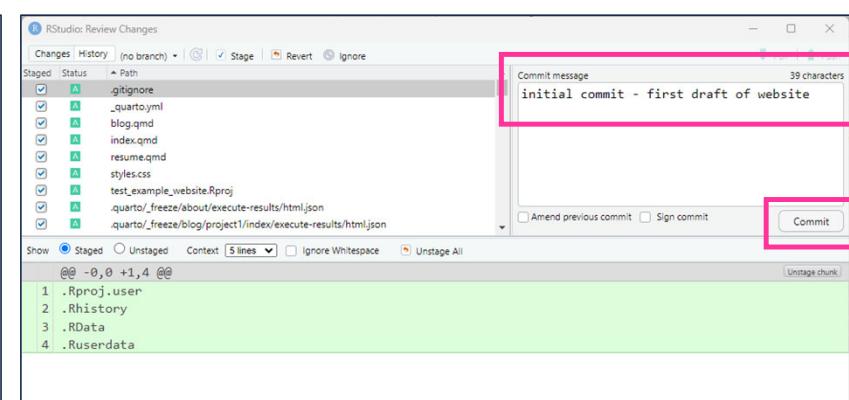


```
MINGW64:/c/Users/DanYavorsky/Documents/test_example_website
AzureAD+DanYavorsky@GBK-PC-12 MINGW64 ~/Documents/test_example_website (main)
$ git add .

AzureAD+DanYavorsky@GBK-PC-12 MINGW64 ~/Documents/test_example_website (main)
$ git commit -m "initial commit - first draft of website"
```



Check the boxes to “stage” your files

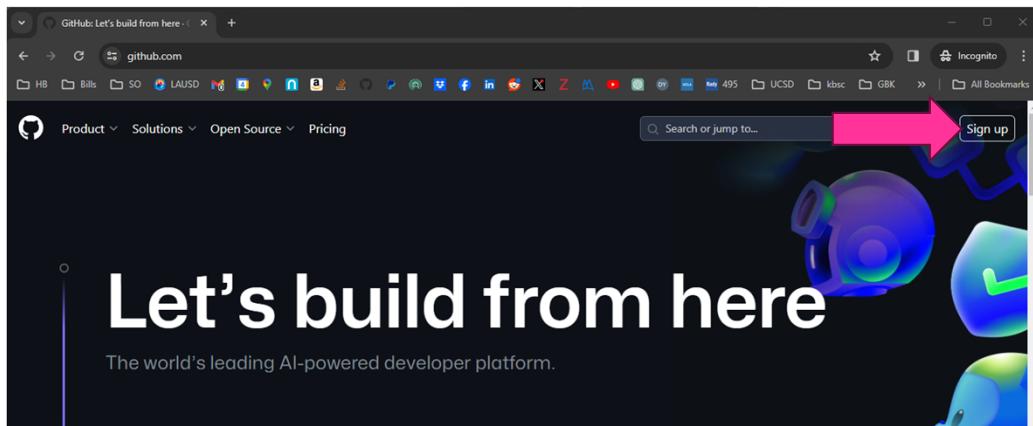


Add a commit message and click “Commit”

CREATE A GITHUB USERNAME/PASSWORD

Go to www.github.com

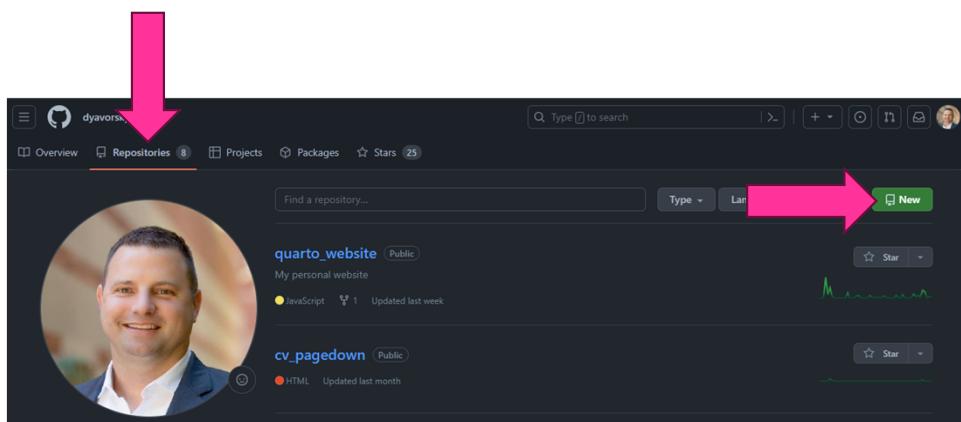
- Click “Sign Up” in the top right
- Follow prompts to enter email, password, and username.
NOTE: email must match the `git config user.email`
- Pick a username that is short, lowercase, and timeless
(eg, `dyavorsky` instead of `dYavorskyUCSD2024`)

A screenshot of the GitHub sign-up process. The page starts with a "Welcome to GitHub! Let's begin the adventure" message. It then asks for "Enter your email*" with a checked field containing "dyavorsky2@gmail.com". Next, it asks for "Create a password*" with a checked field containing "*****". Finally, it asks for "Enter a username*" with a checked field containing "dyavorsky2". At the bottom, there is an "Email preferences" section with an unchecked checkbox for "Receive occasional product updates and announcements." and a "Continue" button.

CREATE A REPO ON GITHUB

Create a GitHub repository with a specific name:

- Select the “repositories” tab in GitHub
- Click the green “New” button on the right
- Name your repository “username.github.io”
- Choose “public”



Create a new repository

A repository contains all project files, including the revision history. A [Import a repository](#).

Required fields are marked with an asterisk (*).

Owner * dyavorsky

Repository name * dyavorsky.github.io

dyavorsky.github.io is available.

Great repository names are short and memorable. Need inspiration? [Get inspired](#)

Description (optional) My Personal Website

PUSH YOUR LOCAL FILES ONTO GITHUB

- Copy the URL from the “Quick Setup” using https
<https://github.com/dyavorsky/dyavorsky.github.io.git>

- In your terminal, tell your local computer where on GitHub to connect:
git remote add origin [copied url]

- And then push your local files to that GitHub repo:

```
git push -u origin main
```

(elect to authenticate your GitHub account with a browser when prompted)

```
C:\Users\DanYavorsky\Documents\test_example_website>git remote add origin https://github.com/dyavorsky/example_website_ucsd_2024.git
```

```
C:\Users\DanYavorsky\Documents\test_example_website>git push -u origin main
```

Enumerating objects: 128, done.

Counting objects: 100% (128/128), done.

Delta compression using up to 20 threads

Compressing objects: 100% (98/98), done.

Writing objects: 100% (128/128), 2.84 MiB | 1.42 MiB/s, done.

Total 128 (delta 11), reused 0 (delta 0), pack-reused 0 (from 0)

remote: Resolving deltas: 100% (11/11), done.

To https://github.com/dyavorsky/example_website_ucsd_2024.git

* [new branch] main -> main

branch 'main' set up to track 'origin/main'.

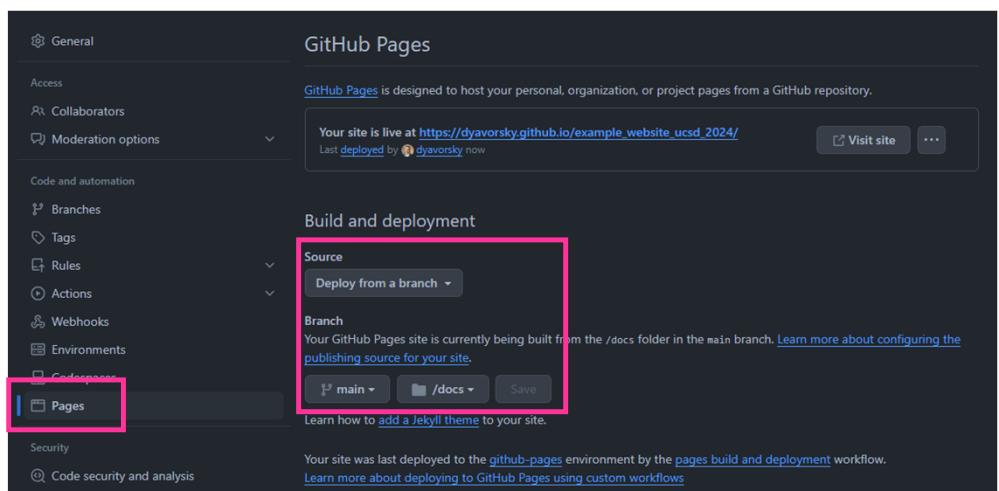
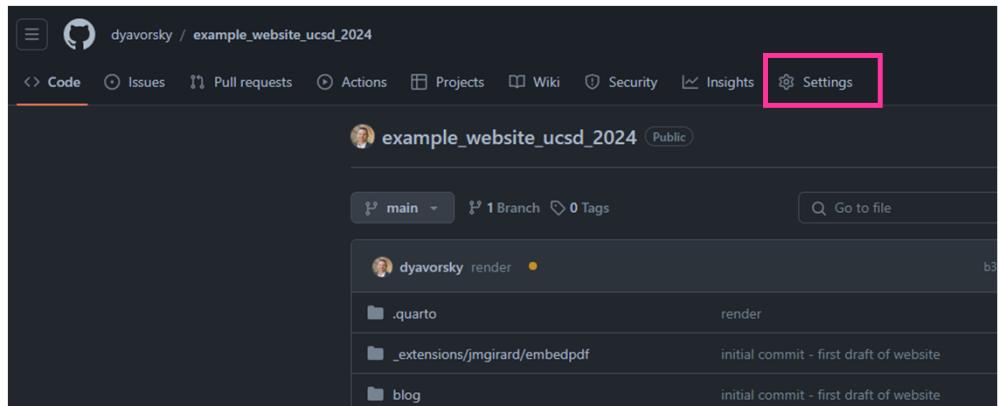
Your files are now on GitHub! →

| example_website_ucsd_2024 | | |
|------------------------------|---|---------------|
| File | Commit Message | Last Commit |
| .quarto | render | now |
| _extensions/jmglard/embedpdf | initial commit - first draft of website | 1 hour ago |
| blog | initial commit - first draft of website | 1 hour ago |
| docs | render | now |
| images | initial commit - first draft of website | 1 hour ago |
| resume | initial commit - first draft of website | 1 hour ago |
| .gitignore | render | now |
| .nojekyll | updates | 2 minutes ago |
| _quarto.yml | updates | 2 minutes ago |
| blog.qmd | initial commit - first draft of website | 1 hour ago |
| index.qmd | initial commit - first draft of website | 1 hour ago |
| resume.qmd | initial commit - first draft of website | 1 hour ago |
| styles.css | initial commit - first draft of website | 1 hour ago |
| test_example_website.Rproj | initial commit - first draft of website | 1 hour ago |

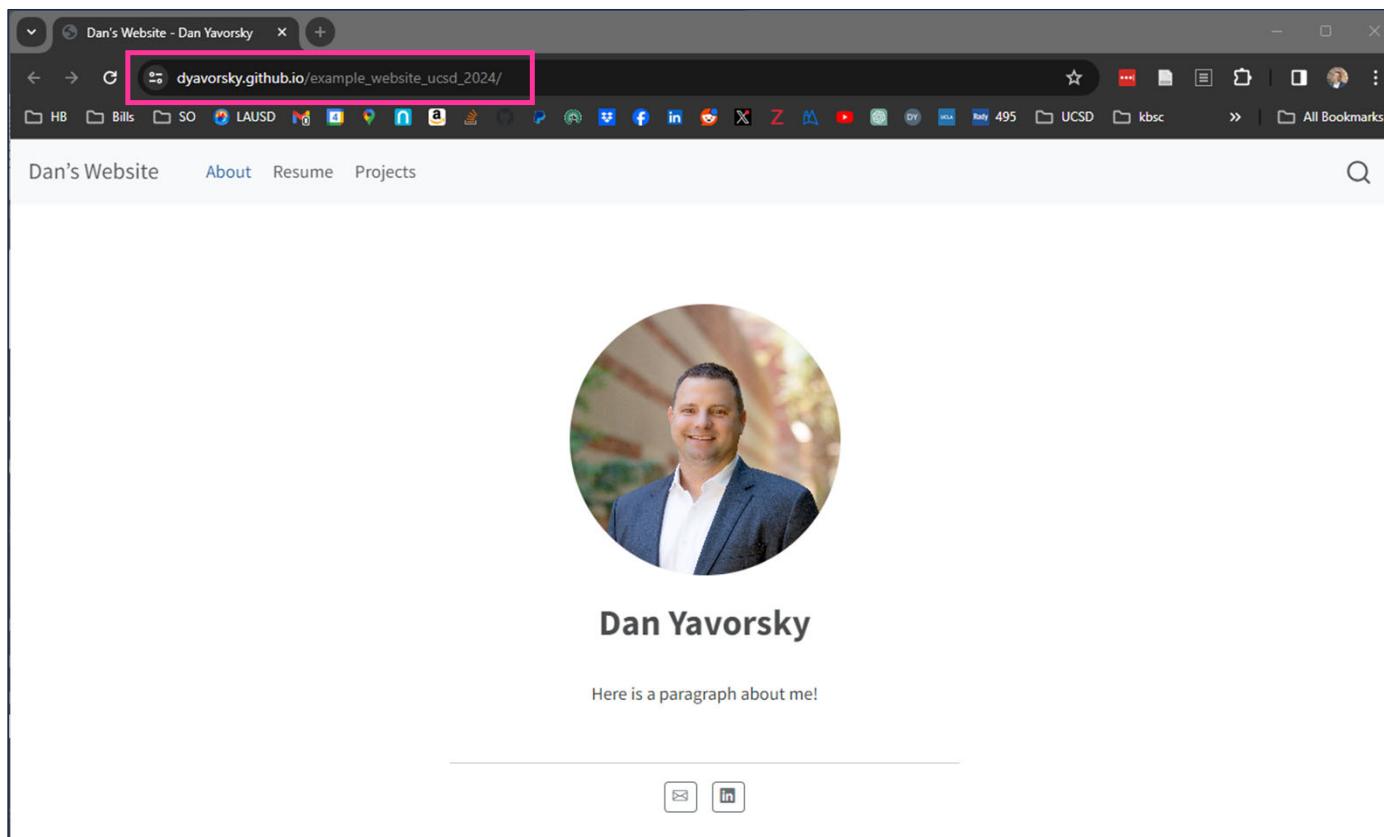
ENABLE WEBPAGE DEPLOYMENT

To set up this repo as a webpage:

- Go to the repo's settings
- On the left, select “Pages”
- Under “Build and deployment” select
 - Deploy from a branch
 - main/docs
- Click “save”
- You'll get a message at the top linking you to your live, public webpage!



VIEW YOUR LIVE, PUBLIC WEBSITE



UPDATE AND EDIT WEBSITE

To update your website

1. Make changes in RStudio
2. Render your website locally with those changes
3. Add and Commit the changes and rendered pages via the Git tab
4. Push your files up to GitHub

