

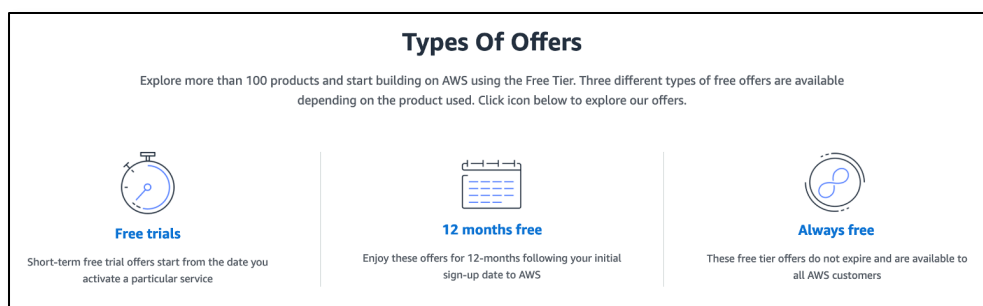
Criando uma instalação do RStudio no Amazon Web Services (AWS)

por Adriana Melges Quintanilha Weingart

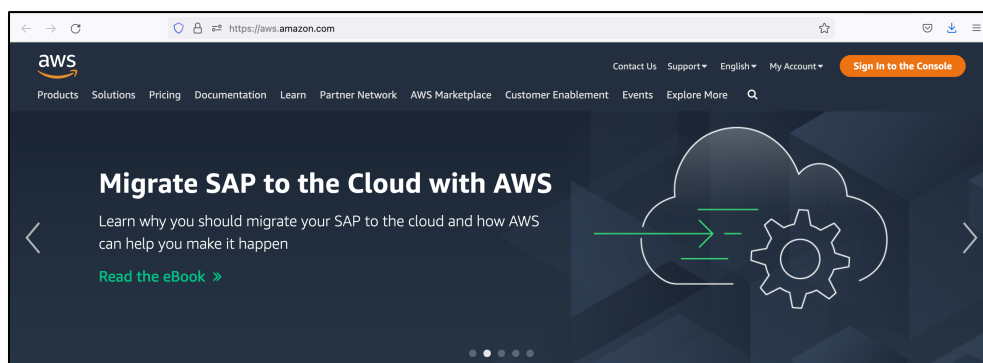
Procedimento baseado (e adaptado) no “**How to run RStudio on AWS in under 3 minutes for free**”, disponível pelo link: <https://towardsdatascience.com/how-to-run-rstudio-on-aws-in-under-3-minutes-for-free-65f8d0b6ccda>

Amazon Web Services / AWS: <https://aws.amazon.com/>

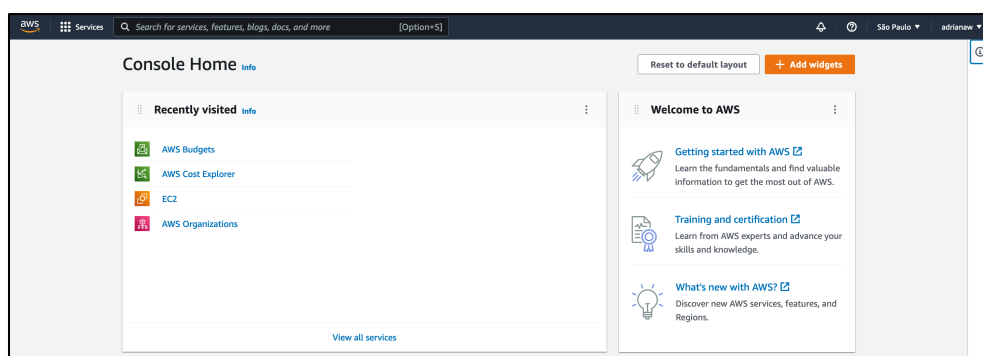
IMPORTANTE: A AWS tem algumas opções de Produtos Gratuitos (Free Tier Products). Há também opções Free Trial e serviços gratuitos por 12 meses. Você pode conhecer todas as opções no link: <https://aws.amazon.com/free>.



Se você já criou seu acesso e está retornando, pode acessar sua conta pelo link: <https://aws.amazon.com/>.



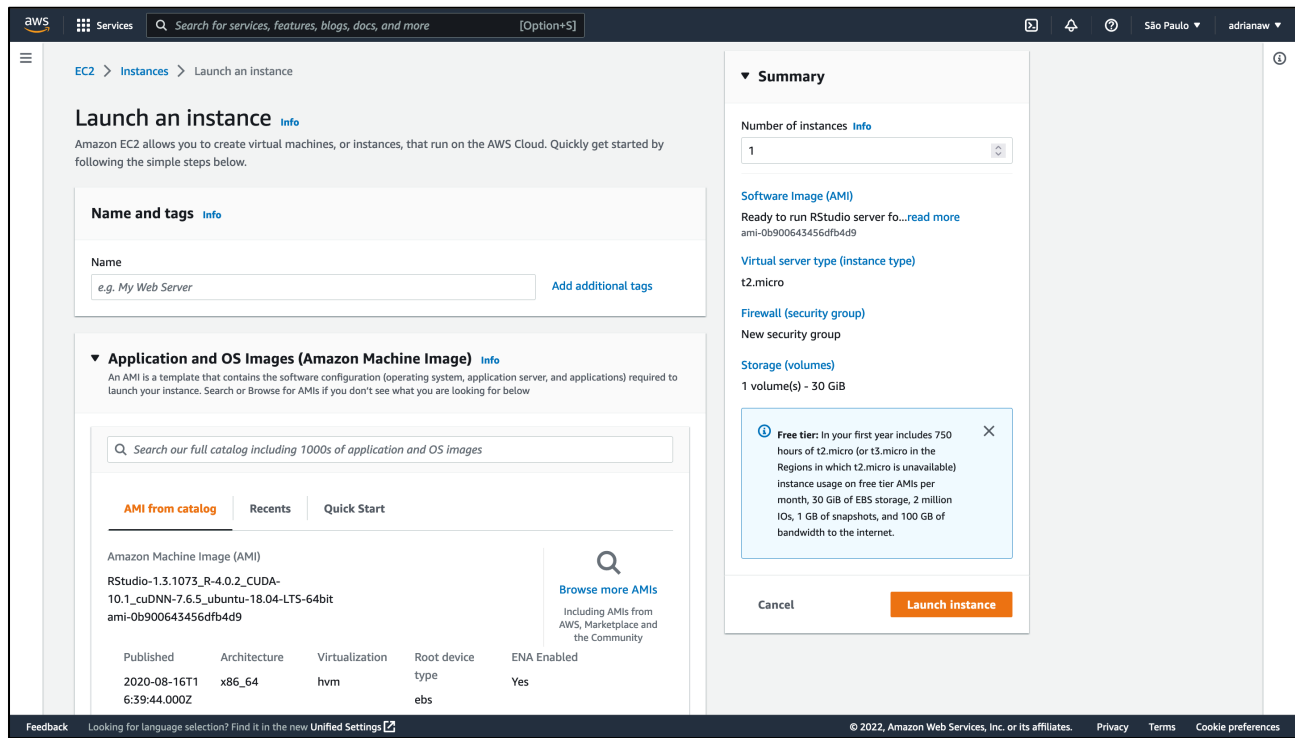
Sua console será parecida com esta:



Escolhendo uma região com a AMI do RStudio Server

Abra outra janela do seu browser, e acesse o [site Louis Aslett](https://www.louisaslett.com/RStudio_AMI/)¹, que lista imagens para RStudio na AWS - RStudio Server Amazon Machine Image (AMI). Escolha a região para suas máquinas virtuais (VMs) e clique no link ao lado (por exemplo, [ami-0b900643456dfb4d9](https://aws.amazon.com/marketplace/pp/prodview-ami-0b900643456dfb4d9), para South America, São Paulo). Este link te levará diretamente para a console de gerenciamento do EC2.

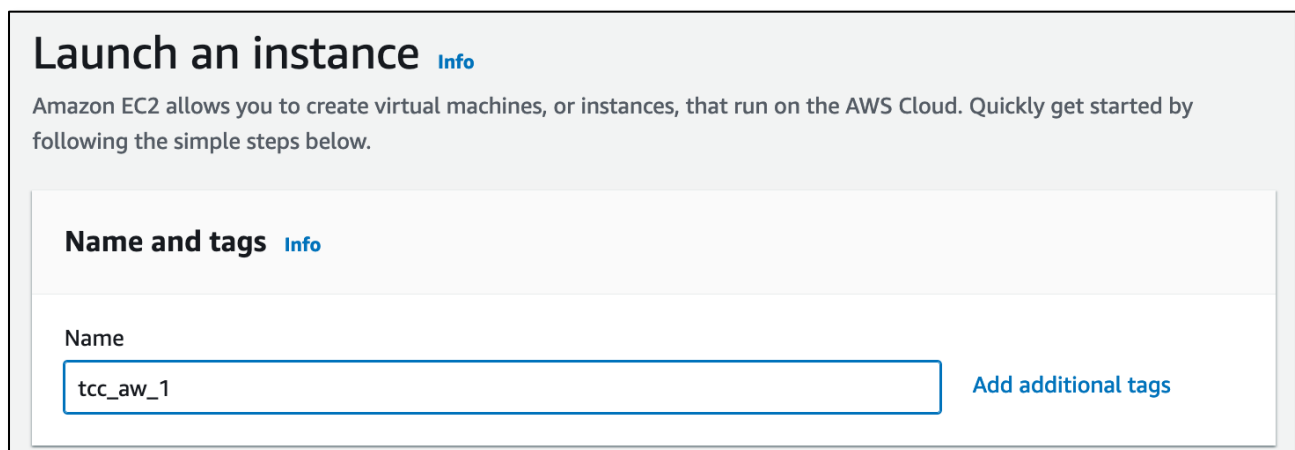
IMPORTANT! Note que cada região tem custos de serviços diferentes. Se latência não for um problema para suas atividades, pode ser interessante explorar outras regiões, mesmo que mais distantes para achar uma com custo menor.



Configurando a instância

Siga completando as informações para cada grupo de configurações. Quase tudo vem com algumas opções pré-selecionadas (que você pode aceitar ou trocar).

Primeiramente escreva um nome para sua máquina virtual / instância:



¹ RStudio Server AMI: https://www.louisaslett.com/RStudio_AMI/

Nesta próxima sessão, não há nada a ser feito – apenas valide que está selecionada uma AMI do RStudio:

▼ **Application and OS Images (Amazon Machine Image)** [Info](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Q Search our full catalog including 1000s of application and OS images

AMI from catalog

Recents

Quick Start

Amazon Machine Image (AMI)

RStudio-1.3.1073_R-4.0.2_CUDA-10.1_cuDNN-7.6.5_ubuntu-18.04-LTS-64bit
ami-0b900643456dfb4d9

Published

Architecture

Virtualization

Root device type

ENA Enabled

2020-08-16T16:39:44.000Z

x86_64

hvm

ebs

Yes

Q

[Browse more AMIs](#)

Including AMIs from AWS, Marketplace and the Community

A seguir, selecione o tipo de instância desejada (dependendo da sua necessidade de vCPU e memória – atenção ao custo relacionado, que além de variar por região, também varia por tipo de instância!)

i

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

X

▼ **Instance type** [Info](#)

Instance type

t2.micro

Family: t2 1 vCPU 1 GiB Memory

On-Demand Linux pricing: 0.0186 USD per Hour

On-Demand Windows pricing: 0.0232 USD per Hour

Free tier eligible

▼

[Compare instance types](#)

Crie uma “key pair”, clicando no link “Create new key pair”.

▼

Key pair (login) [Info](#)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - *required*

Select

▼

↺

Create new key pair


Create key pair

×

ⓘ

We noticed that you didn't select a key pair. If you want to be able to connect to your instance it is recommended that you create one.

Key pairs allow you to connect to your instance securely.

Enter the name of the key pair below. When prompted, store the private key in a secure and accessible location on your computer. **You will need it later to connect to your instance.** [Learn more](#) 

☒ Create new key pair

☐ Proceed without key pair

Key pair name

Enter key pair name

The name can include upto 255 ASCII characters. It can't include leading or trailing spaces.

Key pair type

☒ RSA

RSA encrypted private and public key pair

☐ ED25519

ED25519 encrypted private and public key pair (Not supported for Windows instances)

Private key file format

☒ .pem

For use with OpenSSH

☐ .ppk

For use with PuTTY

Cancel

Create key pair

Escolha o nome para sua “key pair”, e salve-a em lugar seguro.

Key pair name

Enter key pair name

The name can include upto 255 ASCII characters. It can't include leading or trailing spaces.

A seguir, configure as opções de rede, selecionando SSH, HTTP and HTTPS traffic:

▼ Network settings [Info](#) Edit

Network [Info](#)
vpc-0a9a2df1c1ac15abf

Subnet [Info](#)
No preference (Default subnet in any availability zone)

Auto-assign public IP [Info](#)
Enable

Firewall (security groups) [Info](#)
A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.


☒ Create security group ☐ Select existing security group

We'll create a new security group called 'launch-wizard-2' with the following rules:

☒ Allow SSH traffic from Anywhere
0.0.0.0/0
Helps you connect to your instance

☒ Allow HTTPs traffic from the internet
To set up an endpoint, for example when creating a web server


☒ Allow HTTP traffic from the internet
To set up an endpoint, for example when creating a web server

 Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only. ×

E configure o storage, selecionando o tamanho desejado (Novamente, atenção aos limites da “free tier” e custos para outras configurações!)

▼ Configure storage [Info](#) Advanced

1x GiB Root volume

 Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage ×

Add new volume

The selected AMI contains more instance store volumes than the instance allows. Only the first 0 instance store volumes from the AMI will be accessible from the instance

0 x File systems Edit

Revise a configuração feita no Summary, na tela ao lado direito.

▼ Summary

Number of instances [Info](#)

1

Software Image (AMI)

Ready to run RStudio server fo...[read more](#)
ami-0b900643456dfb4d9

Virtual server type (instance type)



t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 30 GiB

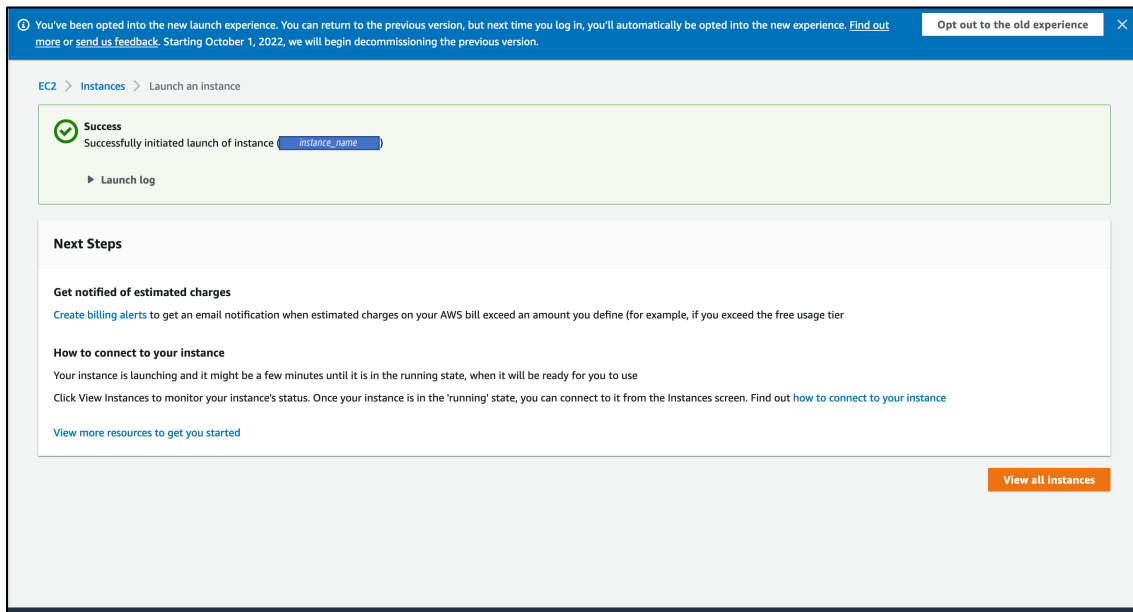
 **Free tier:** In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet. 

Cancel

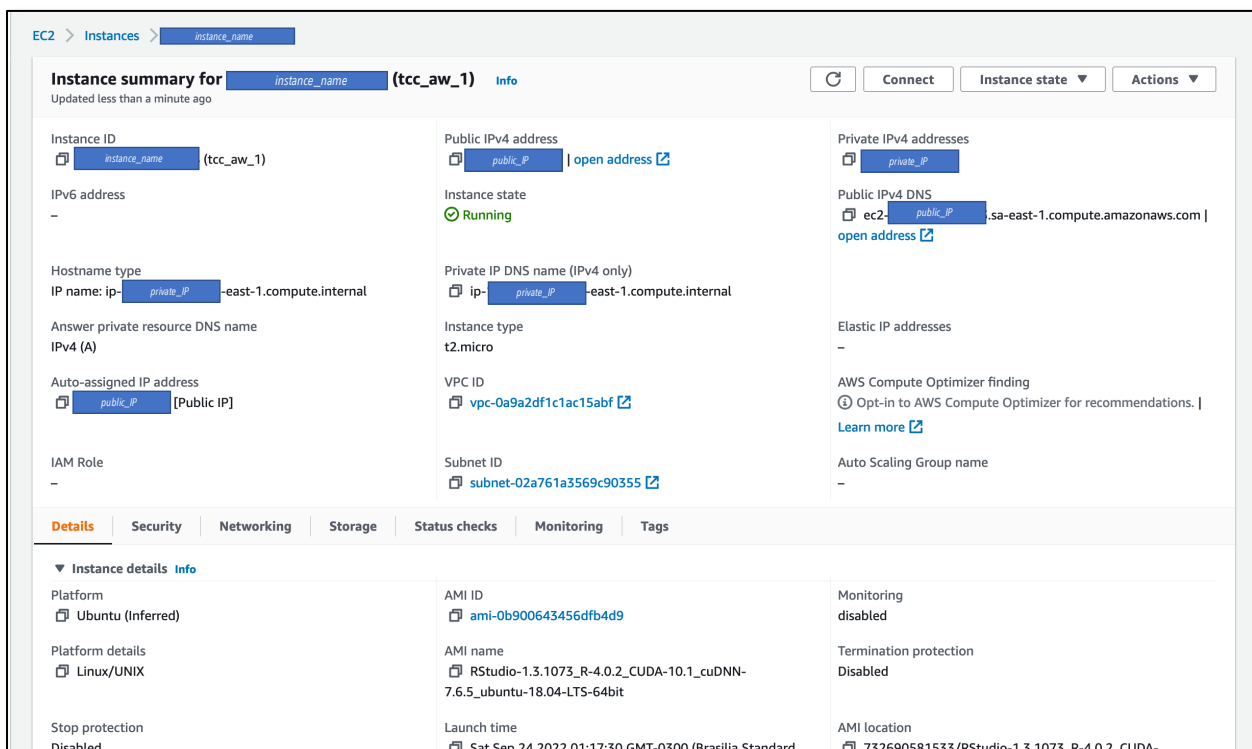
Launch instance

Estando tudo certo, clique no botão “Launch instance”.

Após alguns minutos, a mensagem de sucesso será exibida, incluindo o nome da instância criada.



Detalhes da instância criada:

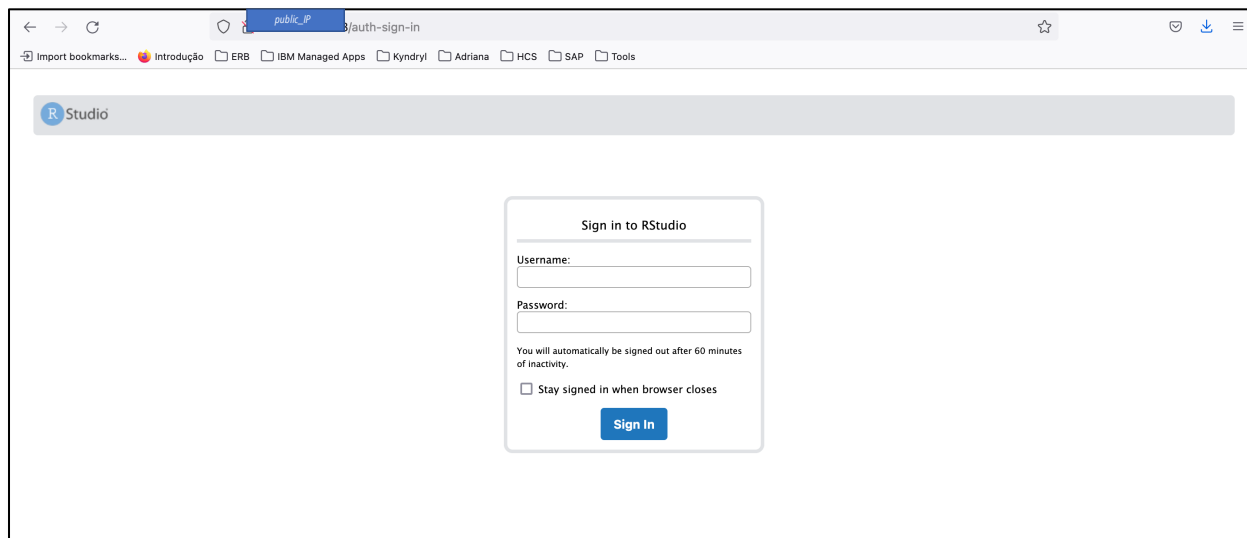


Nesta tela, tome nota dos seguintes dados:

- Public IPv4 address
- Instance ID

Acessando o RStudio

Para acessar o RStudio, abra uma nova janela do browser, e acesse o IP Público (Public IPv4 address) anotado na página de detalhes da instância. Uma tela de login do RStudio carregará.



O usuário de conexão será “rstudio”, e a senha, o nome da sua instância (i-xxxxx), disponível na tela de detalhes da instância.

Sign in to RStudio

Username:

Password:

You will automatically be signed out after 60 minutes of inactivity.

☐ Stay signed in when browser closes

Sign In

Pronto! Seu RStudio está pronto para ser usado:

The screenshot displays the RStudio web interface in a browser window. The address bar shows the URL `15.228.226.103`. The interface is divided into several panes:

- Source Editor:** Contains a file named `Welcome.R` with the following content:

```
1 # Welcome! This RStudio Amazon AMI contains RStudio Server version 1.3.1073,  
2 # running R 4.0.2 on Ubuntu 18.04 LTS.  
3 # Includes support for Shiny (add /shiny/rstudio to URL).  
4 # NEW: experimental support for CUDA 10.1 (incl. cuDNN 7.6.5) and Magma 2.5.3  
5 # enabling use of GPU packages in R and higher performance for deep  
6 # learning frameworks such as TensorFlow.  
7 # AMI created by Louis Aslett (http://www.louisaslett.com/). If you've  
8 # any comments or suggestions please mail louis.aslett@durham.ac.uk  
9  
10 # NOTE: It is recommended that you change the password for logging into RStudio,  
11 # which you can do by changing from the Console to the Terminal tab below,  
12 # launching a new terminal, and running the passwd command.  
13 # Alternatively, since this AMI was created to make RStudio Server accessible to  
14 # those who are less comfortable with Linux commands you can follow the  
15 # instructions below to change it without touching Linux.  
16  
17 # There is a mini package where functions to manipulate the server will be  
18 # placed. This includes a function to change the password. First load the  
19 # package:  
20 # library(smallR)  
21 (Top Level) >
```
- Console:** Shows the R startup message:

```
Platform: x86_64-pc-linux-gnu (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.  
  
>
```
- Environment:** Shows the Global Environment, which is currently empty.
- Files:** A file explorer showing the project structure:

Name	Size	Modified
.Rhistory	0 B	Aug 16, 2020, 11:35 AM
R		
ShinyApps		
Welcome.R	2.1 KB	Aug 16, 2020, 9:28 AM