

## Deploying Shiny apps

- ▶ The Shiny package itself is designed to run Shiny applications locally.
- ▶ To share Shiny applications with other R users, you can send them your application source as a GitHub gist, R package, or zip file.

## Sharing Apps to Run Locally

- ▶ Once you've written your Shiny app, you can distribute it for others to run on their own computers; they can download and run Shiny apps with a single R command.
- ▶ All that this requires is that they have R and Shiny installed on their computers.

# Deploying Shiny

## Gist

- ▶ One easy way is to put your code on `gist.github.com`, a code pasteboard service from **GitHub**.
- ▶ Both `server.R` and `ui.R` must be included in the same gist, and you must use their proper filenames.
- ▶ See <http://gist.github.com/3239667> for an example.

- ▶ Your recipient must have R and the Shiny package installed, and then running the app is as easy as entering the following command:

```
shiny::runGist('3239667')
```

- ▶ In place of '**3239667**' you will use your gists ID; or, you can use the entire URL of the gist (e.g. '*https://gist.github.com/3239667*').

## Advantages of using Gist

- ▶ Source code is easily visible by recipient (if desired)
- ▶ Easy to run (for R users)
- ▶ Easy to post and update

## Cons

- ▶ Code is published to a third-party server

## GitHub repository

- ▶ If your project is stored in a git repository on GitHub, then others can download and run your app directly. An example repository is at **`http://github.com/rstudio`**
- ▶ The following command will download and run the application:

```
shiny::runGitHub('shiny_example', 'rstudio')
```

*In this example, the GitHub account is 'rstudio' and the repository is 'shiny example'; you will need to replace them with your account and repository name.*

## Github: Advantages

- ▶ Source code is easily visible by recipient (if desired)
- ▶ Easy to run (for R users)
- ▶ Very easy to update if you already use GitHub for your project
- ▶ Git-savvy users can clone and fork your repository

## Disadvantages

- ▶ Developer must know how to use git and GitHub.
- ▶ Code is hosted by a third-party server.

# Deploying Shiny

## Making it into a Package

- ▶ If your Shiny app is useful to a broader audience, it might be worth the effort to turn it into an R package. Put your Shiny application directory under the `packages` inst directory, then create and export a function that contains something like this:

```
shiny::runApp(system.file('appdir',  
  package='packagename'))
```

where `appdir` is the name of your apps subdirectory in `inst`, and **packagename** is the name of your package.



# Deploying Shiny

## **Making it into a Package:**

### **Advantages**

- ▶ Publishable on CRAN
- ▶ Easy to run (for R users)

### **Disadvantages**

- ▶ More work to set up
- ▶ Source code is visible by recipient (if not desired)

### Deployment over the Web

- ▶ You can also deploy Shiny applications over the web, so that users need only a web browser and your applications URL.
- ▶ For this, you'll need a Linux server and our Shiny Server software.
- ▶ Shiny Server is free and open source, though in the future RStudio will offer a commercially licensed edition with additional features for larger organizations.
- ▶ RStudio also working on a subscription-based hosting service for Shiny.

# Deploying Shiny apps : Shiny Server

## Shiny Server

- ▶ Shiny Server is if you want to use your own server instead of hosting it on Rstudio's server (i.e. **glimmer**).
- ▶ This is really important for those who can't let their code or data out of their organization, or want more computational/storage resources than glimmer can offer, or need their apps to access their internal network.