

# Index

February 14, 2019

## 1 Jupyter Site

JupyterSite allows you to easily build a suite of rendered documents from Jupyter notebooks. Jupyter notebooks go in, html/markdown pages, PDFs, slideshows, and tex comes out. If you use this in a Github repository, it will even build a Github pages site. This also shows how to make the notebooks easily accessible in Julia.

It just takes one button, simplifying the entire process. The `publish.sh` file does all the heavy lifting, showing you how to do all of this (any of the conversions can be disabled by commenting out the appropriate lines).

### 1.1 Example Site

An example of the product this package generates can be found at: <https://github.com/UCIDataScienceInitiative/IntroToJulia>.

The site that this generates is: <http://UCIDataScienceInitiative.github.io/IntroToJulia/>

### 1.2 Installation

To use this, first install Jupyter (note: Python must be installed)

```
pip install jupyter
```

For the PDF output to work, a distribution of LaTeX must be installed. Also, we will need pandoc:

```
pip install pandoc
```

### 1.3 Using the Package

#### 1.3.1 Downloading the Template

The easiest way to get started is to clone the package repository using Git:

```
git clone https://github.com/ChrisRackauckas/JupyterSite
```

### 1.3.2 The Notebooks

The files which the site is built from are the notebooks that are included in the Notebooks folder. The `Index.ipynb` file build the site index (the first page shown in the webpage) and additional `.ipynb` files are rendered in the various forms. Thus to add your own content, simply add the `.ipynb` files to this directory.

Note that notebooks have to be setup for slides in order for the slideshow to work. Inside the notebook, use `view > CellToolbar > Slideshow` and set the appropriate blocks to slides.

### 1.3.3 Building The Site

To build the site files, use the `publish.sh` file. To do so, go to the top directory of the repository and use the command:

```
sh publish.sh
```

If your Git is correctly setup, this will render the files and upload the files to Github. Upon success, your `index.html` will be available at:

```
http://<github-username>.github.io/<repository-name>/
```

For example, my user name is ChrisRackauckas and this repository is named JupyterSite. Therefore the site for that this makes is at

```
http://ChrisRackauckas.github.io/JupyterSite/
```

For organizations, the user name is replaced with the organization name.

**Caveat** Note that PDF output is not compatible with the usage of Markdown images (though code with images will allow the PDFs to build, but the images will not appear).

## 1.4 Easy Usage from Julia

This repository is also setup as a Julia package repository. To have users easily open up the Jupyter notebooks, they can use the commands from within Julia:

```
In [ ]: Pkg.add("IJulia") # use once to install IJulia
        Pkg.clone("https://github.com/ChrisRackauckas/JupyterSite") # Change this to your Github
        using IJulia
        notebook(dir=Pkg.dir("JupyterSite")*"/Notebooks")
```

This will open up the Jupyter notebook at the location of your notebooks

### 1.4.1 Additional Feature: Continuous Integration Testing

One can use Julia's continuous integration testing framework to test your notebooks. To do so, check out [this blog post](#) for how to setup Julia CI and [NBinclude.jl](#) for how to include notebook files into Julia. Use this to add tests to the `test/runtests.jl` file. To run the tests locally, use the commands

```
In [ ]: Pkg.test("JupyterSite")
```

## 2 Example Output

The example notebooks can be found at:

<https://github.com/ChrisRackauckas/JupyterSite/blob/master/Notebooks>

### 2.1 HTML

<https://chrisrackauckas.github.io/JupyterSite/>

<https://chrisrackauckas.github.io/JupyterSite/Html/GithubIntroduction.html>

### 2.2 Slides

<https://chrisrackauckas.github.io/JupyterSite/Slides/Index.html>

<https://chrisrackauckas.github.io/JupyterSite/Slides/GithubIntroduction.html>

### 2.3 Markdown

<https://github.com/ChrisRackauckas/JupyterSite/tree/master/Markdown>

### 2.4 LaTeX

<https://github.com/ChrisRackauckas/JupyterSite/tree/master/TeX>

### 2.5 PDF

<https://github.com/ChrisRackauckas/JupyterSite/tree/master/Pdfs>