Using Python with RStudio Connect

Python and R are popular data science languages for analyzing data. RStudio Connect (v1.7.0 and higher) provides connectivity to Python for teams and individuals who use both languages:

- Data scientists who use a combination of R and Python
- RStudio users working together with Jupyter Notebook users

Publish Projects that use Python and R from RStudio to RStudio Connect

Use the reticulate library in R scripts, Shiny apps, R Markdown, Plumber APIs to integrate existing Python code and libraries for interactive exploration (pandas), visualization (matplotlib, seaborn), and machine learning (PyTorch, scikit-learn, statsmodels) and publish them to RStudio Connect.

Configure your project to use a specific version of Python in the RStudio IDE or RStudio Server Pro using the RETICULATE_PYTHON environment variable. RStudio Connect supports multiple versions of Python that can be used by published applications.

Publish Notebooks to RStudio Connect from Jupyter or JupyterHub

Publish notebooks to RStudio Connect with the rsconnect-jupyter notebook extension.

Configure Jupyter Notebooks to publish notebooks to RStudio Connect using the following steps from the rsconnect-jupyter documentation:

- Download and install the rsconnect-jupyter package in your Python environment
- Enable the rsconnect_jupyter extension
- Generate an API token from RStudio Connect
- Use one-button publishing to send your Jupyter Notebooks to RStudio Connect
- Schedule email reports or control access to Jupyter Notebooks similar to other deployed applications

Resources:

- RStudio Connect with Python: http://docs.rstudio.com/connect/1.7.0/admin/python.html
- Python examples: https://github.com/sol-eng/python-examples
- Jupyter Notebook extension: http://docs.rstudio.com/rsconnect-jupyter/
- Reticulate library (R Interface to Python): https://rstudio.github.io/reticulate/

requirements.txt

1 matplotlib==2.2.3
2 notebook>=5.7.2
3 numpy==1.15.1
4 pandas==0.23.4
5 seaborn==0.9.0
Publish Jupyter Notebooks

Use an extension for push-button publishing of Jupyter Notebooks to RStudio Connect

- Ability to publish rendered notebook
- Or publish notebook with source code (Python only)
- Handle Python dependencies at publish time

Use Python in R Markdown Documents

Use Python with R for interactive, exploratory analyses in notebooks or mixed Python and R content in documents and reports

- Import Python libraries to use in R Markdown documents
- Call functions in existing Python scripts

Build Shiny apps that use Python

Build interactive applications and dashboards on top of existing Python code and libraries

- Call functions in existing Python scripts directly from Shiny apps
- Execute Python scripts as a Shiny app is being interacted with

Deploy Plumber APIs that use Python

Deploy APIs that combine Python and R code that is executed behind an API endpoint

- Execute Python scripts or use Python libraries when an API is queried

About RStudio

RStudio® makes data analysis with R easier and provides powerful tools for sharing reports, dashboards, and interactive Shiny® applications with your entire enterprise.