



R & Python:

A Data Science Love Story

James Blair
February 2020

Overview

RStudio Overview

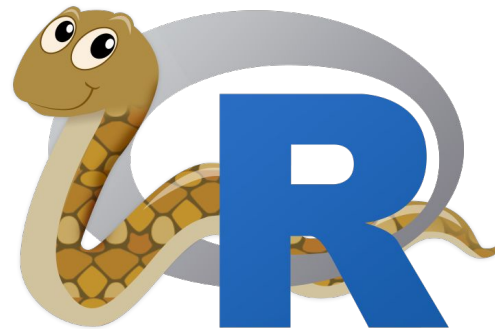
Why R & Python in RStudio?

In this talk, you will learn:

- How Data Scientists can use R & Python together in a single Data Science project
- How IT/DevOps can support those Data Scientists in a single development infrastructure
- How bilingual Data Science teams can efficiently collaborate and share their work with business stakeholders

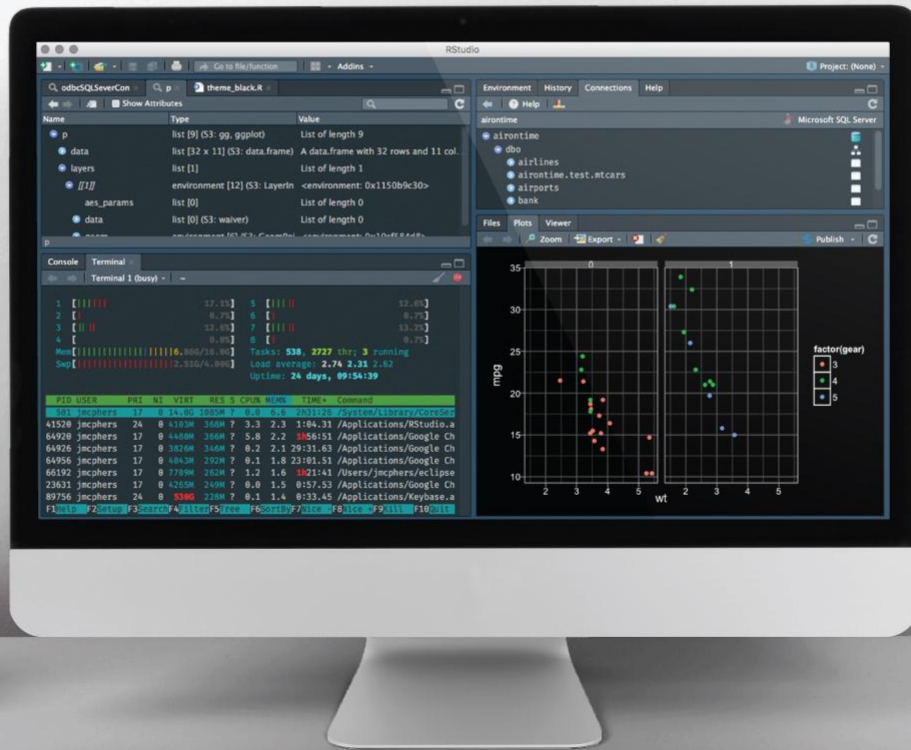
Ongoing Community Investment

Get more info

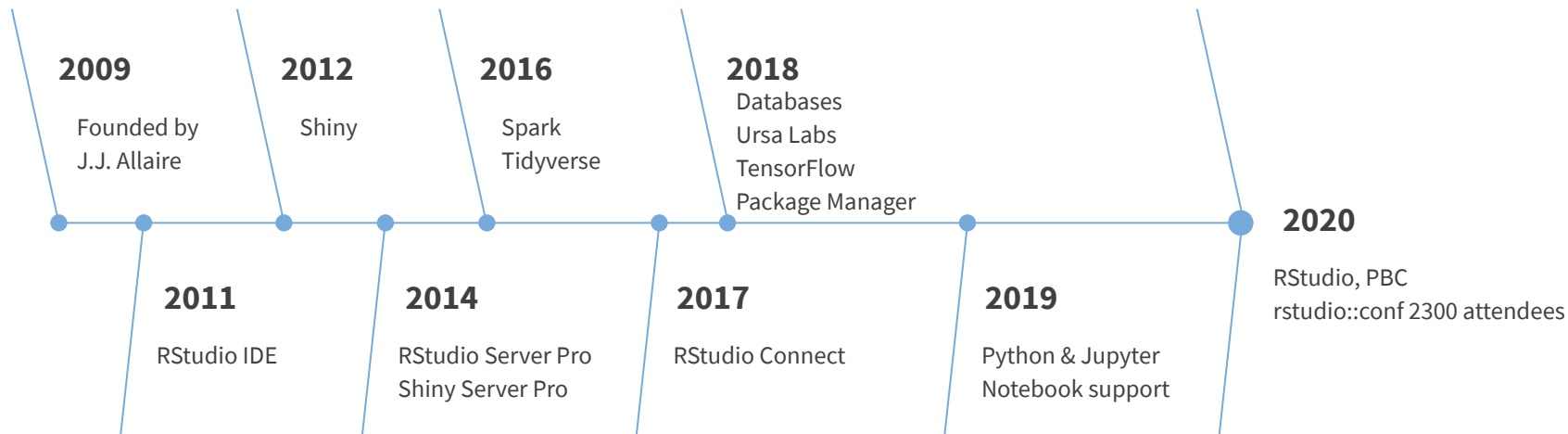


R Studio Overview

February 2020



About RStudio







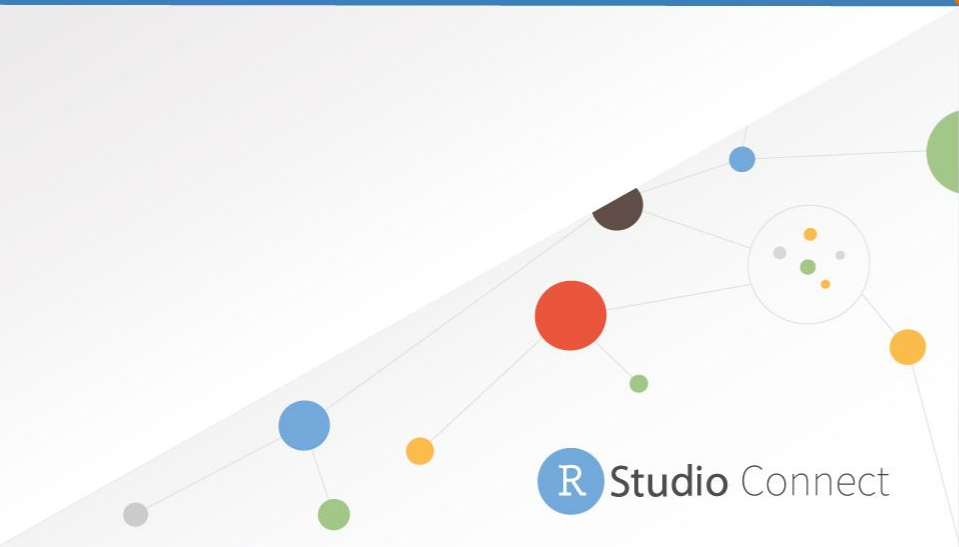






R Studio Server Pro







R Studio Package Manager



R Studio Connect

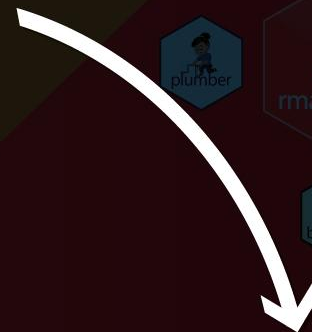


R Studio Server Pro

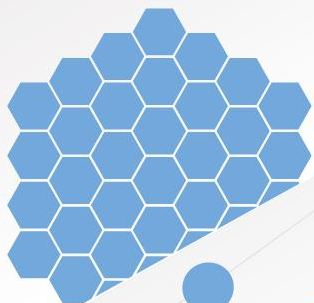


OPEN SOURCE TOOLS

Accessible to everyone



R Studio Package Manager



R Studio Connect

R Studio Server Pro



OPEN SOURCE TOOLS

Accessible to everyone

ENTERPRISE PRODUCTS

Invest in



R Studio Package Manager

R Studio Server Pro

R Studio Connect



Strategy

50%*

of company is
Engineering

52%*

of engineering
is open source

* As of February 5, 2020

Why R & Python in RStudio?

- Help organizations realize the full value of all their Data Science investments
- Long term focus on integrating with the tools and environments that Data Scientists need. E.g.,
 - Shiny
 - Spark
 - SQL/Databases
- Now, we've expanded our Python support to help bilingual Data Science teams
 - Tensorflow integration
 - reticulate package
 - Python, Jupyter Notebooks and JupyterLab support

Common Challenges for Bilingual Data Science Teams



Data Scientists

Want to use the best tool for the job, so constantly need to switch contexts among multiple environments.



DevOps/IT

Spending time and resources to maintain, manage and scale separate environments for R and Python in a cost-effective way.



Data Science Leaders

Wrestle with how to share results consistently and deliver value to the larger organization, while providing tools for collaboration between R and Python users on their team.



Business Stakeholders

Not interested in underlying details, but simply want to leverage insights from Data Science to make better decisions.



Maintaining separate environments for each data science language is a pain - especially across desktops! Packages fail, jobs conflict, and your team scrambles to learn unsupported platforms.

DevOps / IT Admin



Maintaining separate environments for each data science language is a pain - especially across desktops! Packages fail, jobs conflict, and your team scrambles to learn unsupported platforms.

Use RStudio Team to:

- Provide a single infrastructure for R & Python
- Enable users favorite tools: RStudio & Jupyter
- Configure, Integrate, Scale, and Secure **once**

DevOps / IT Admin



Studio[®]

&





You want the right tool for the job, but mixing R and Python requires manual translation, duplicate code, and tedious conversion.

Data Scientist



You want the right tool for the job, but mixing R and Python requires manual translation, duplicate code, and tedious conversion.

Use reticulate in RStudio to:

- Combine R & Python in R Markdown
- Source and Use Python Functions in R
- Edit and Run Python in RStudio

Data Scientist





Data Science
Leader

Multilingual teams struggle to collaborate, forced to do repetitive analyses, reinvent wheels and translate work.

Business leaders struggle with the slow iteration time, worry about the value of their data science investment, and fall back on intuition - leading to suboptimal decisions.



Business
Stakeholder



Data Science
Leader

Multilingual teams struggle to collaborate, forced to do repetitive analyses, reinvent wheels and translate work.

Business leaders struggle with the slow iteration time, worry about the value of their data science investment, and fall back on intuition - leading to suboptimal decisions.

Use RStudio Team to:

- Have multi-lingual team members collaborate and share work
- Deploy up-to-date interactive analyses, dashboards and custom reports to a central location for easy discover and controlled access
- Send custom emails with inline data science reports
- Make better decisions based on the latest information



Business
Stakeholder

A decorative network diagram in the top right corner of the slide. It features a central large blue circle connected to several smaller circles of various colors (red, green, yellow, grey, dark blue, light blue, and brown). These smaller circles are further connected to other nodes, creating a web-like structure. Some nodes are isolated, while others are part of small clusters.

R Studio Connect

Connect data scientists with decision makers



<http://rstd.io/gartner-movies>

Solving the Major Challenges for R & Python Teams



Data Scientists

- Combine R and Python in a single project
- Launch Jupyter Notebooks or JupyterLab from a single infrastructure



DevOps/IT

- Provide a single infrastructure for R & Python
- Enable users favorite tools: RStudio & Jupyter
- Configure, Integrate, Scale, and Secure ONE TIME



Data Science Leaders

- Enable collaboration across your team, maximize productivity
- Deliver regularly updated results, custom reports, and self-serve apps in a single location or via email

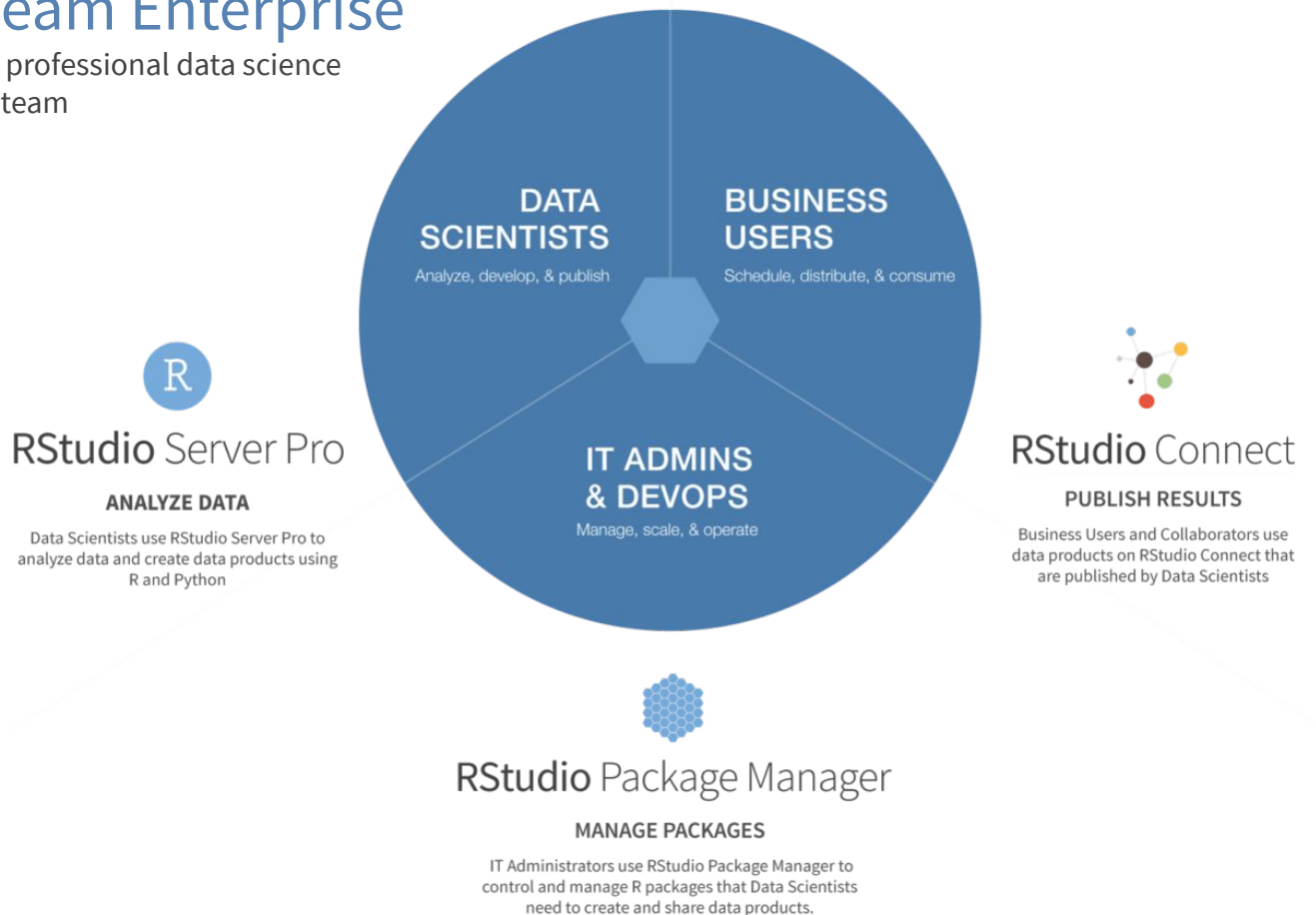


Business Stakeholders

- Access up-to-date interactive analyses, dashboards and emails
- Get answers when you need them to make better decisions

RStudio Team Enterprise

Our recommended professional data science solutions for every team



[Click for Team Enterprise Demo Video](#)

Ongoing Investment in R & Python Communities



For More Information



- Overview of R & Python: A Love Story: rstudio.com/python
- [Contact us](#) to learn more, get answers
- [Webinar recording](#)
- [Talk Materials](#)
- reticulate package
 - [Package website](#)
 - [Examples](#) and [Webinar](#)
- Documentation
 - [RStudio Server Pro and Jupyter](#)
 - [Sharing Jupyter Notebooks](#) in RStudio Connect
- [RStudio Community](#)



Questions?

Or to set up a conversation:
rstudio.drift.click/R_and_Python