Python in R

December 10, 2024

Python in R

Today's Co-organizer and Speaker:

Kewalin Samart

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Adapted materials from R-Ladies Baltimore
developed by Tiffany Timbers, PhD

Volunteer signup:
https://bit.ly/RLA-fall24volunteer

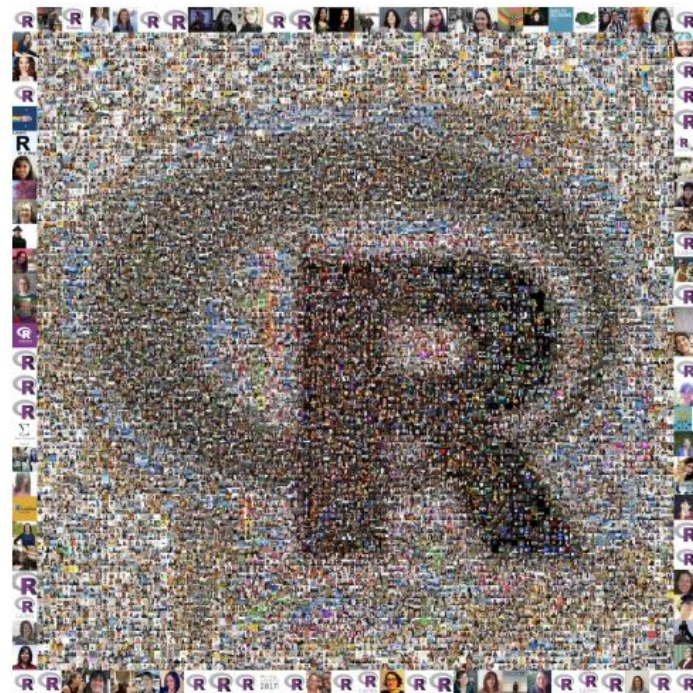# Today's Sponsor

Who We R!?

R-Ladies Kick-off Event on Jul 25, 2024

RLA Co-organizer team: Jade, Keenan, Janani, Kewalin, Stacey (left to right)

Worldwide organization that promotes **gender diversity** in the **#rstats** community via meetups and mentorship in a **friendly** and **safe** environment

Part of **R-Ladies - 240 groups**
R-Ladies Aurora
Aurora, CO, USA
69 members · Public group
Organized by **R-Ladies Global** and **4 others**

New Members?

1. Join us, RSVP for events on **Meetup**

https://www.meetup.com/rladies-aurora/

2. Join our discussion forum on **Discord**

https://bit.ly/RLA-discord

Fall' 24 Workshops

- Intro to R Functions
- DataViz 2.0
- R Package Development
- Presenting to Non-Scientific Audiences
- **Python in R**
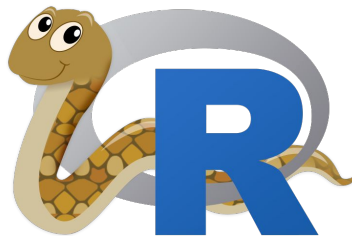
Presentation Materials

https://github.com/rladies-aurora
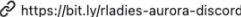
Intro | Meet & Greet

- Pizza + Sign-in 🍕 + Introduce yourself to your neighbor
  - Who you are | Name, affiliation

- **Installations:**
  - R and Rstudio: https://bit.ly/RLA-install-R
  - Python, conda, and VSCode: https://bit.ly/RLA-install-python

- **Need help? Red sticky up! All set: Green!**

What's miniconda?
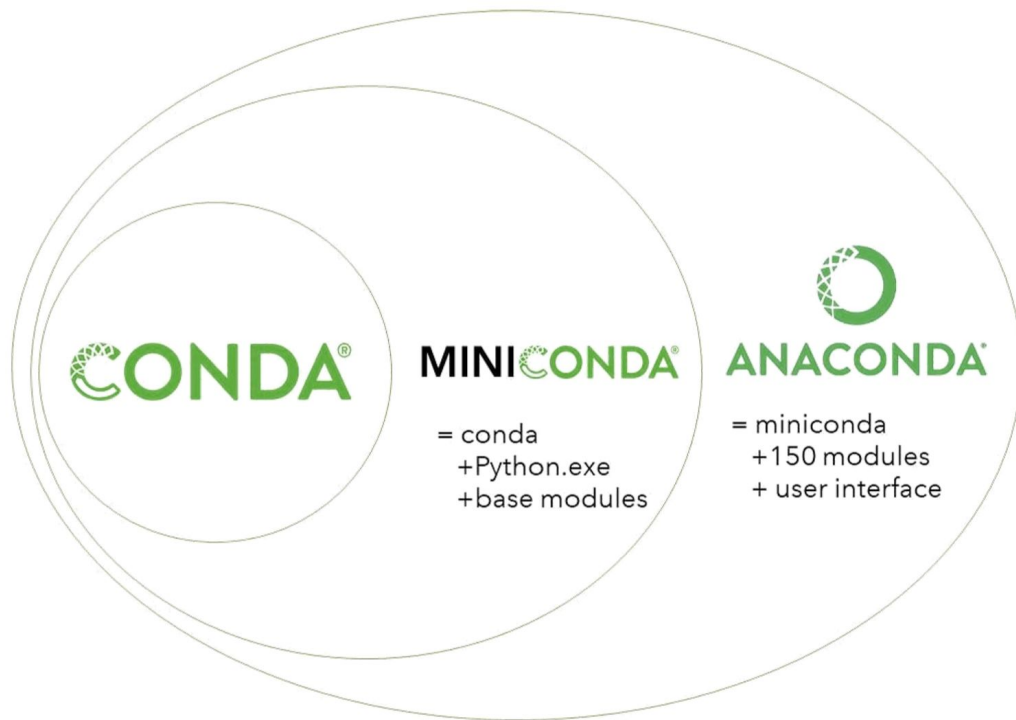
Miniconda is **a minimal installer for the Conda package manager and its ecosystem**. It provides a lightweight way to install Conda without bundling all the additional scientific packages included in the larger Anaconda distribution. This makes Miniconda ideal for users who want to set up customized Python or R environments without the bulk of pre-installed libraries.

Today! Dec 10, 2024

Intro to {reticulate}

+ Choosing the "best" software tool or language for the job

Demos:

- Set-up {*reticulate*} after installing *miniconda*
- Run Python repl in RStudio
- Create, edit and run Python scripts in RStudio
- Weaving Python into R Markdown

– Ping us on Discord with any Questions –

Aurora

The data science software stack

Type of tools needed: **Examples:**

- Programming
  language

- Code editor

- Version
  control software

Choosing the BEST tool for the job

Reproducible and auditable

Accurate

Collaborative

{reticulate}

The reticulate package provides a comprehensive set of tools for interoperability between Python and R. The package includes facilities for:

- **Calling Python from R** in a variety of ways including R Markdown, sourcing Python scripts, importing Python modules, and using Python interactively within an R session.
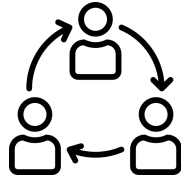- **Translation between R and Python objects** (for example, between R and Pandas data frames, or between R matrices and NumPy arrays).
- Flexible binding to different versions of Python including virtual environments and Conda environments.

Reticulate embeds a Python session within your R session, enabling seamless, high-performance interoperability. If you are an R developer that uses Python for some of your work or a member of data science team that uses both languages, reticulate can dramatically streamline your workflow!

Installations

https://bit.ly/RLA-install-R

https://bit.ly/RLA-install-python

Need help? Red sticky up! All set: Green!

Using Python in RStudio