

# R usage in Operation Research Interviews from ORSSA 2023

with

## Handre Williams

Director at NPCartel



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### Johannesburg R User Group Meetup

12<sup>th</sup> September 2023, 18h30 to 20h00 (GMT+2)

In-person (Microsoft, Bryanston)

[https://www.rusergroup.co.za/our\\_events.html](https://www.rusergroup.co.za/our_events.html)

# R Community Code of Conduct

A member of the R Community is:



**Open**  
Members of the community are open to collaboration, whether it's on projects, working groups, packages, problems, or otherwise.



Members of the community are considerate of their peers.



Members of the community are respectful.

Overall, we're good to each other. We contribute to this community not because we have to, but because we want to. If we remember that, these guidelines will come naturally.

# Call for Participation

## Speakers

Interested in speaking or would you like to propose an event, hackathon, panel discussion, round table or any sort of initiative.

## Attendance

Bring a friend

# Developer Communities @Microsoft JHB Office



12 Sep 2023

Community	Meetup Registration & RSVP link	Start Time	Venue	Organizer
<b>Johannesburg PowerApps and Flow</b>	<a href="https://aka.ms/JHBPowerAppsAndPowerAutomateUG">https://aka.ms/JHBPowerAppsAndPowerAutomateUG</a>	16:30	Auditorium 1	Dawid van Heerden, Michael O'Donovan
	<b>Networking &amp; Refreshments for all attendees</b>	<b>18:00-18:30</b>	<b>Outside Auditorium 2</b>	<b>Microsoft</b>
<b>The Johannesburg Data Platform User Group</b>	<a href="https://aka.ms/JHB-DataPlatform-UG">https://aka.ms/JHB-DataPlatform-UG</a>	18:30	Auditorium 1	Michael Johnson, Warren Rocchi
<b>Microsoft Developer User Group JHB</b>	<a href="https://aka.ms/SouthAfrican-Azure-UserGroup">https://aka.ms/SouthAfrican-Azure-UserGroup</a>	18:30	Auditorium 2	Dustyn Lightfoot
<b>Johannesburg R User Group</b>	<a href="https://aka.ms/JHB-R-UG">https://aka.ms/JHB-R-UG</a>	18:30	Babule Boardroom	Luis de Sousa

# Agenda

Time	Description	Presenter
18h00 – 18h30	Networking	
18h30 – 18h55	Welcome and News	Luis de Sousa
19h00 – 19h55	R usage in Operation Research. Interviews from ORSSA 2023	Handré Williams
20h00	Networking	

# Where to find us

Website <https://www.rusergroup.co.za>

Meetup <https://www.meetup.com/joburg-r-users-group>

GitHub <https://www.github.com/rusergroupcoza>

# Local Community News

- Aidan Horn – Data Scientist at Codera Analytics
  - [https://github.com/coderaanalytics-projects/econdata-blog/blob/master/docs/Learning\\_R\\_programming.md](https://github.com/coderaanalytics-projects/econdata-blog/blob/master/docs/Learning_R_programming.md)

## How to learn R (the programming language)

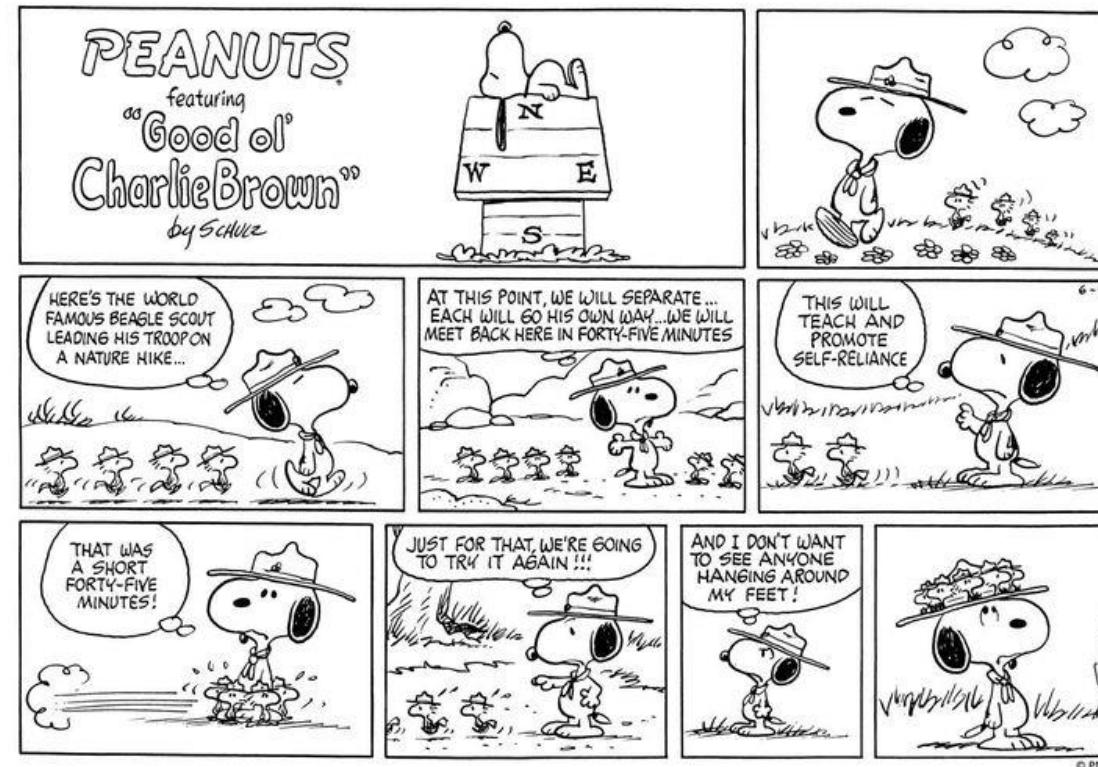
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R is a middle-level programming language that is well-designed for handling and analysing data, data visualization, and statistics. Python is more designed for advanced apps, and for machine learning, in comparison to R.

The two main factors when deciding how to learn R are costs and personal motivation, and there is often a trade-off between the two, but have some recommendations for the most optimal choices. Unless you are a savant, we also think that interactivity is important when learning. Below, we describe our recommendations in order, with our highest recommended choice first.

# R version 4.3.1 (2023-06-16) "Beagle Scouts"

- Peanuts by Charles Schulz for May 13, 1974



# R version 4.3.1 (2023-06-16) "Beagle Scouts"

## Snoopy's Beagle Scouts

 [SIGN IN TO EDIT](#) | 

The **Beagle Scouts** led by [Snoopy](#) are a recurring theme in [Charles M. Schulz](#)'s comic strip, [Peanuts](#). They consist of one beagle, Snoopy, and a number of his bird friends: [Woodstock](#), [Fred](#), [Roy](#), [Wilson](#), [Conrad](#), [Olivier](#), [Harriet](#), [Bill](#) and [Raymond](#).

### Contents

[[hide](#)]

1. History
2. Notable appearances in the strip
3. Characteristics
4. Quotes



Snoopy and his Beagle Scouts.

# Community News (Powered by [www.rweekly.org](http://www.rweekly.org))

Bruno Rodrigues Follow  
@brodriguesco@fosstodon.org

I don't think I've ever read the paper that introduced the R programming language here it is stat.auckland.ac.nz/~ihaka/dow...

#RStats

**R: A Language for Data Analysis and Graphics**  
ROSS IHAKA and Robert GENTLEMAN

In this article we discuss our experience designing and implementing a statistical computing language. In developing this new language, we sought to combine what we felt were useful features from two existing computer languages. We feel that the new language provides advantages in the areas of portability, computational efficiency, memory management, and scoping.

**Key Words:** Computer language; Statistical computing.

September 6, 2023 at 6:02 PM · · Tusky · 3 · 22 · ★  
35

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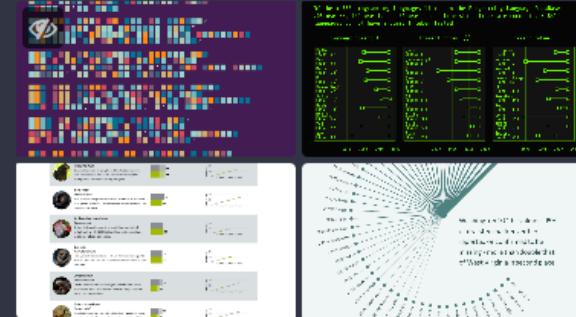
# Community News (Powered by [www.rweekly.org](http://www.rweekly.org))

Nicola Rennie  
@nrennie@fosstodon.org [Follow](#)

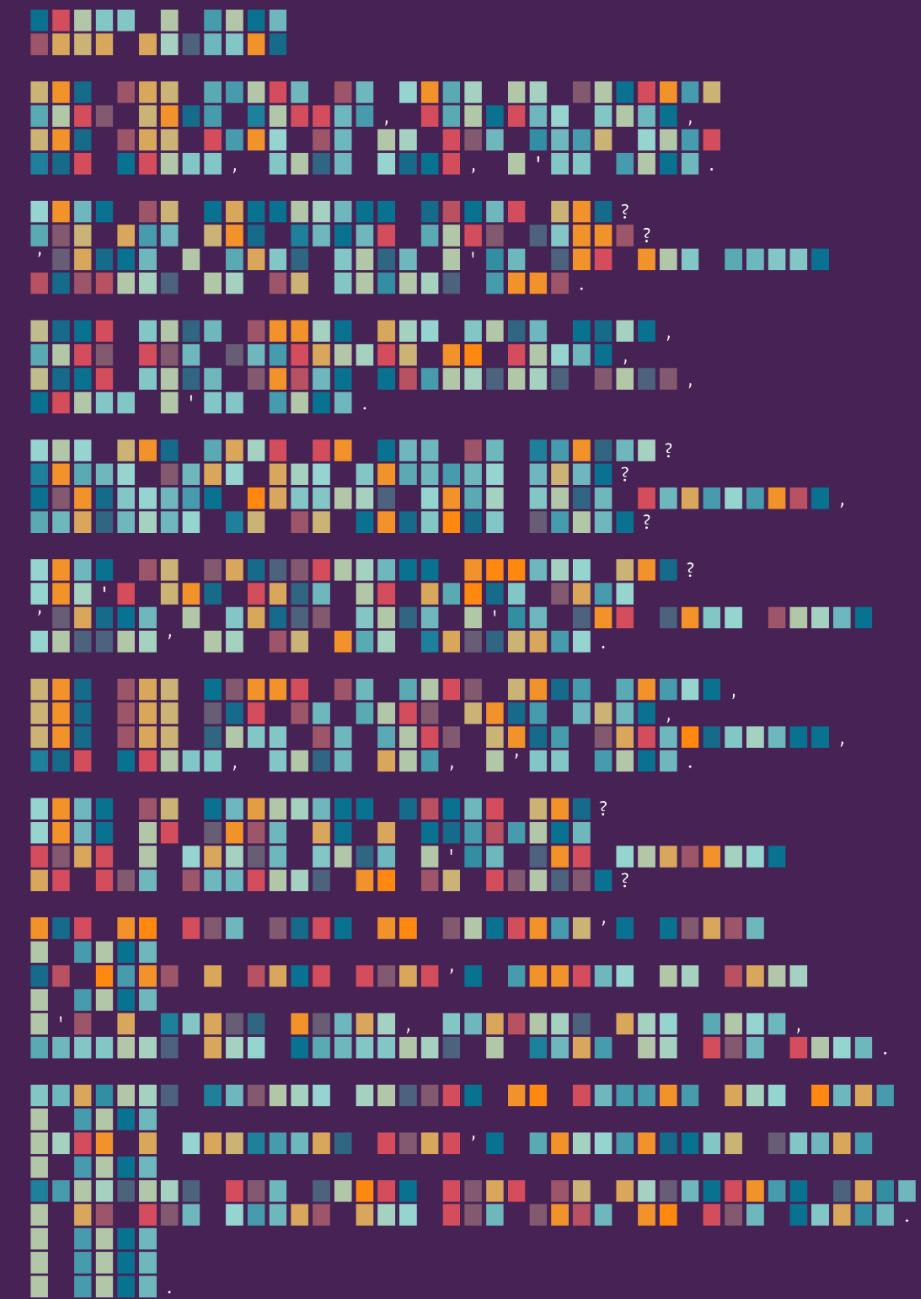
I'm very happy to see four of my data visualisations long-listed at the 2023 Information is Beautiful Awards! All of mine were made using #RStats, using publicly available data - most of them shared via #TidyTuesday!

You can see mine and other visualisations at: [informationisbeautifulawards.c...](http://informationisbeautifulawards.com)

#DataViz #IIBAwards  
#InformationIsBeautiful



September 2, 2023 at 5:59 PM · 6 · 77 · 163



## LEMURS AT DUKE LEMUR CENTER

Lemurs are a unique group of primates native to Madagascar, an island off the coast of east Africa. Although they are related to monkeys and apes, lemurs make up a separate branch of the primate family tree and are classified as a superfamily, made up of five individual lemur families and more than 100 different species. Founded in 1966 on the campus of Duke University in Durham, NC, the Duke Lemur Center is a world leader in the study, care, and protection of lemurs—Earth's most threatened group of mammals. The Duke Lemur Center houses the world's largest and most diverse population of lemurs outside their native Madagascar.

How many male and female lemurs are housed at Duke Lemur Center?

NB: Darker shade indicates number of current residents.



### Ring-tailed lemur

*Lemur catta*

Ring-tailed lemurs are the most intensely studied of all the lemurs. They're also the most easily recognizable species of lemur, and the most common primates in human care.



How do male and female lemurs grow as they age?

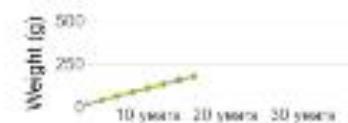
NB: Averages across all male and female lemurs recorded.



### Gray mouse lemur

*Micocelus murinus*

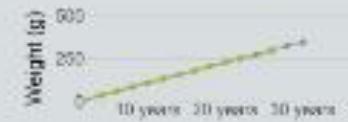
Since they are so small and require fewer resources than other lemurs, mouse lemurs have adapted well to disturbed forests in Madagascar and are one of the most widespread and abundant lemur species.



### Fat-tailed dwarf lemur

*Cheirogaleus medius*

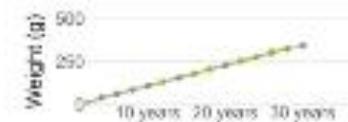
The fat-tailed dwarf lemur is the only primate in the world known to hibernate for an extended period of time. Hibernation can last up to seven months and heart rate can drop from about 180 bpm to as low as 8.



### Eulemur hybrid

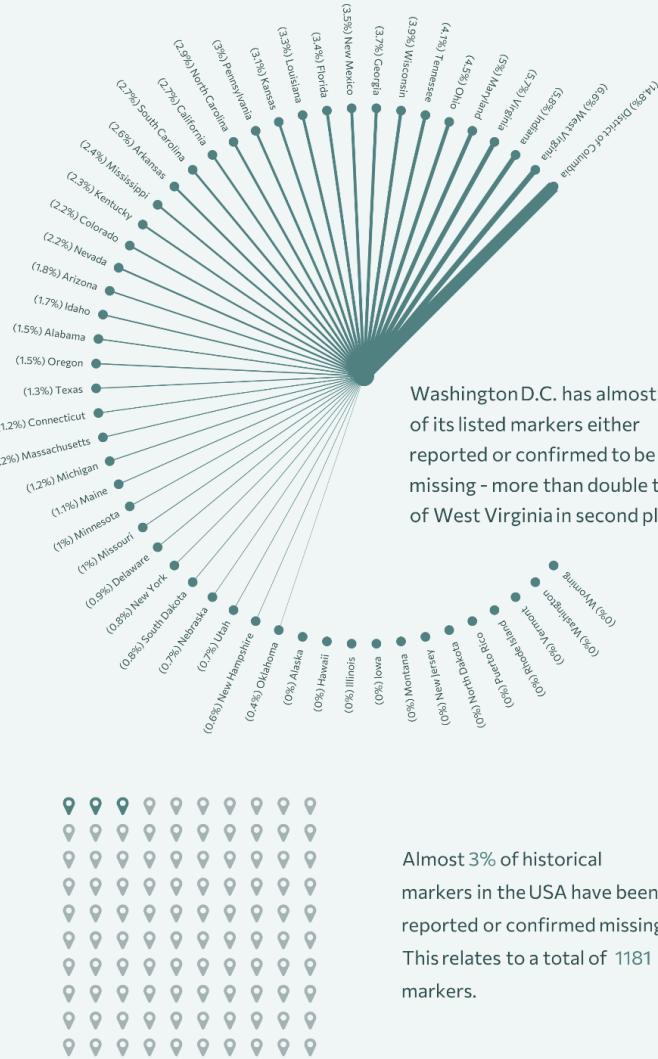
*Eulemur*

Eulemur hybrid lemurs (brown lemur hybrids) are hybrids from different species of brown lemurs. At Berenty Reserve in Madagascar, the collared brown lemurs have been hybridized with the red lemur.



## Missing Markers

National and global events all happened somewhere, and historical markers mark where many occurred. The Historical Marker Database keeps track of where such markers are located. It includes some markers have been reported (and sometimes confirmed) as missing. Some states have far more markers labelled as missing than others.



Washington D.C. has almost 15% of its listed markers either reported or confirmed to be missing - more than double that of West Virginia in second place.

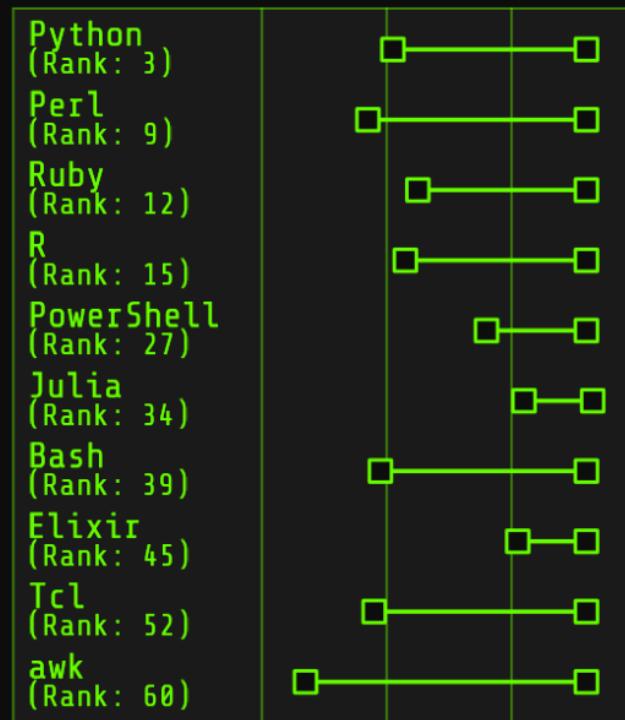


Almost 3% of historical markers in the USA have been reported or confirmed missing. This relates to a total of 1181 markers.

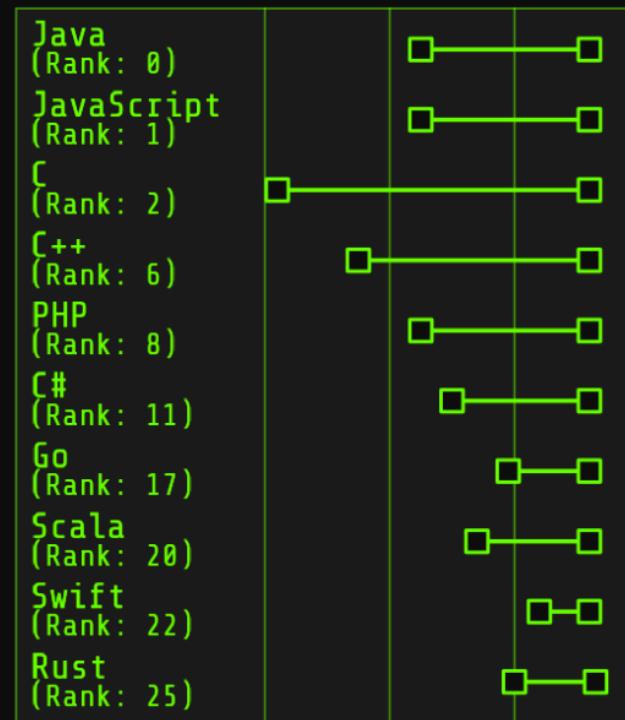
# Programming Languages

Of the 4,303 programming languages listed in the Programming Language DataBase, 205 use //, 101 use #, and 64 use ; to define which lines are comments. 3,831 languages do not have a comment token listed.

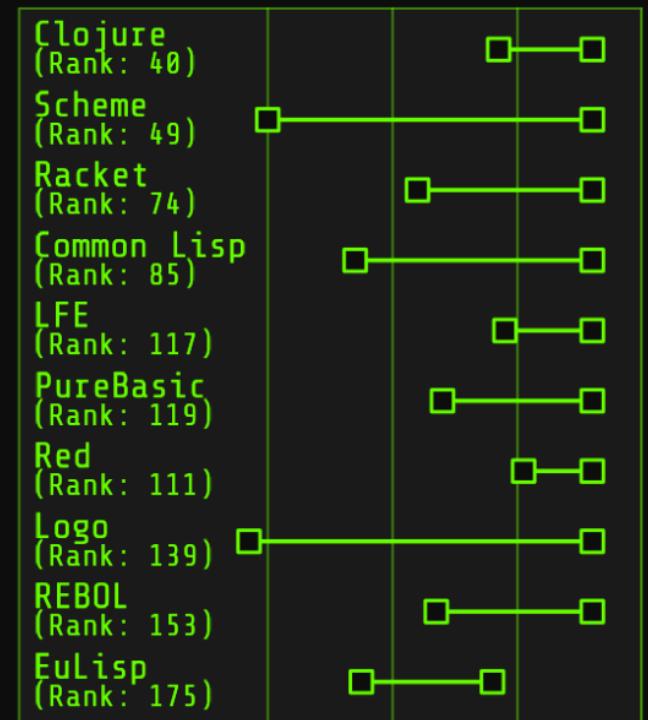
Comment token: #



Comment token: //



Comment token: ;



@nrennie35



fosstodon.org/@nrennie



nrennie

# Events

- 17 – 20 September 2023: Posit::conf (2023) | In-Person & Virtual | Chicago
- 27 November – 1 December 2023: Annual Conference of the South African Statistical Association | Durban
- 8-11 July 2024: useR! 2024 | In-Person & Virtual | Salzburg, Austria.

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The screenshot shows the homepage of the Operations Research Society of South Africa (ORSSA). The header features the ORSSA logo (a red circle with three curved lines) and the text 'The Operations Research Society of South Africa' and 'The home of decision intelligence'. Below the header, there is a navigation menu with links to Home, About, Membership, Conference, Events, Publications, Awards, History, and Blog. On the right side of the header, there are social media icons for Log In, Facebook, Twitter, LinkedIn, and YouTube. A banner at the bottom of the page announces the '52nd Annual ORSSA Conference'.



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## Jared Norman

Research Officer @ Modelling and Simulation Hub, Africa (MASHA)

Mathematical Modelling and Computer Simulations to inform policy makers. Mostly the focus is on infectious diseases but as is indicated by the name the research has no strict limitations. More info at

<http://www.masha.uct.ac.za/>





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## Dr Elzanie Bothma

Senior Lecturer at Department of Statistics in the School for Mathematical and Statistical Sciences at the North-West University

In 2020, Dr. Bothma was a member of the organizing committee for StatCon2020, an online workshop hosted by the Statistics Department of the North-West University, and the newly formed research entity, Pure and Applied Analytics (PAA). Additionally, she holds a position on the executive committee of the Operations Research Society of South Africa (ORSSA), where she serves as the journal manager for ORION, and is a member of the South Africa Statistical Association (SASA).





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## Dr Diteboho Xaba

Lecturer for the Department of Decision Sciences a multidisciplinary department in the School of Economic and Financial Sciences of the College of Economic and Management Sciences at the University of South Africa

With more than 15 published articles in the areas of optimization and financial econometrics. Furthermore, most of the students are supervised (Masters Students) and supervise are conducting their studies in these two areas.

**EOT**

A black and white photograph of the Johannesburg skyline, featuring the Nelson Mandela Bridge in the foreground and various skyscrapers in the background.

Next Meeting



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## Johannesburg R User Group Meetup

 10<sup>th</sup> October 2023, 18h30 to 20h00 (GMT+2)

 Online and In-person (Microsoft, 3012 William Nicol Drive, Bryanston)

 [https://www.rusergroup.co.za/our\\_events.html](https://www.rusergroup.co.za/our_events.html)

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