Aerial Mzansi

Johannesburg R User Group November 2022

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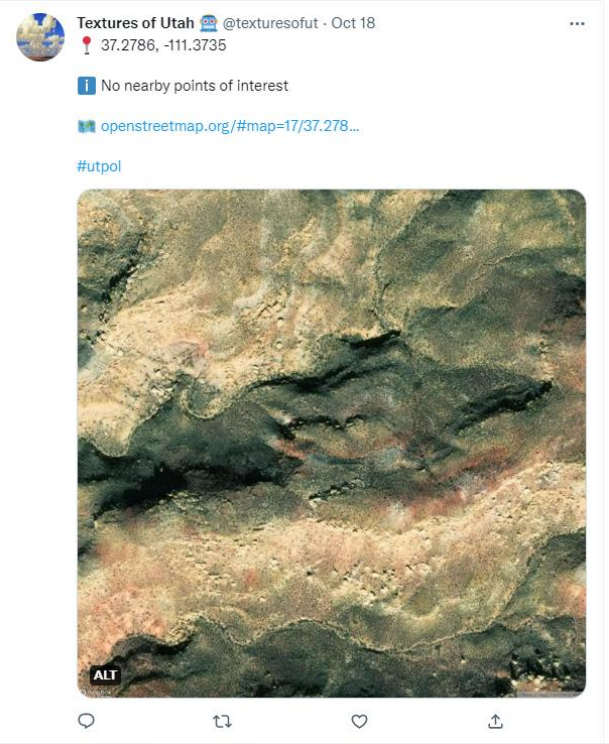
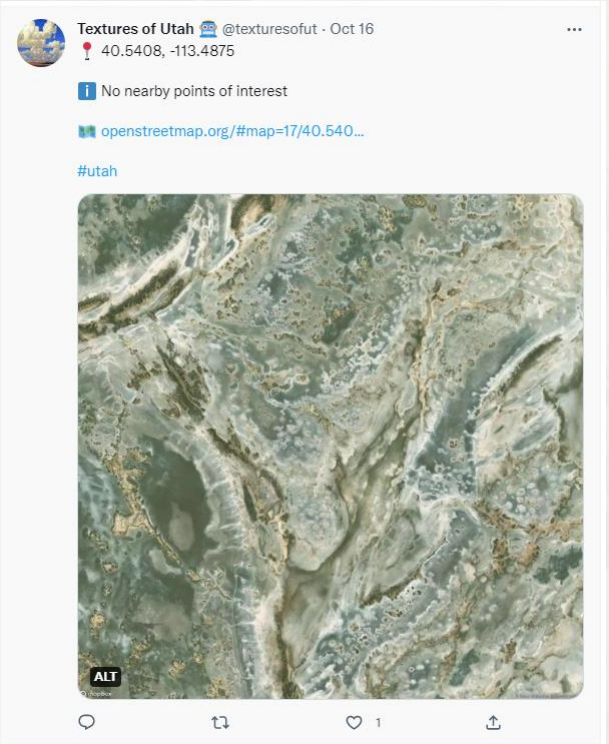
Overview of the project

Purpose

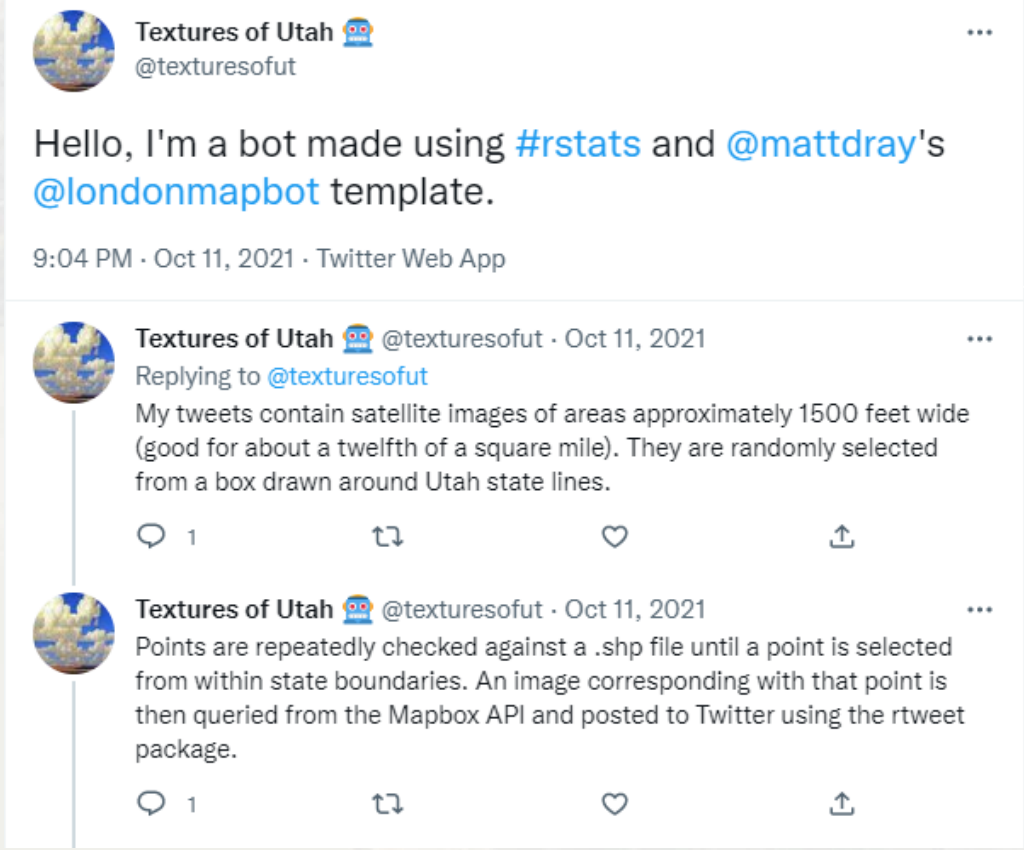
1. Art!





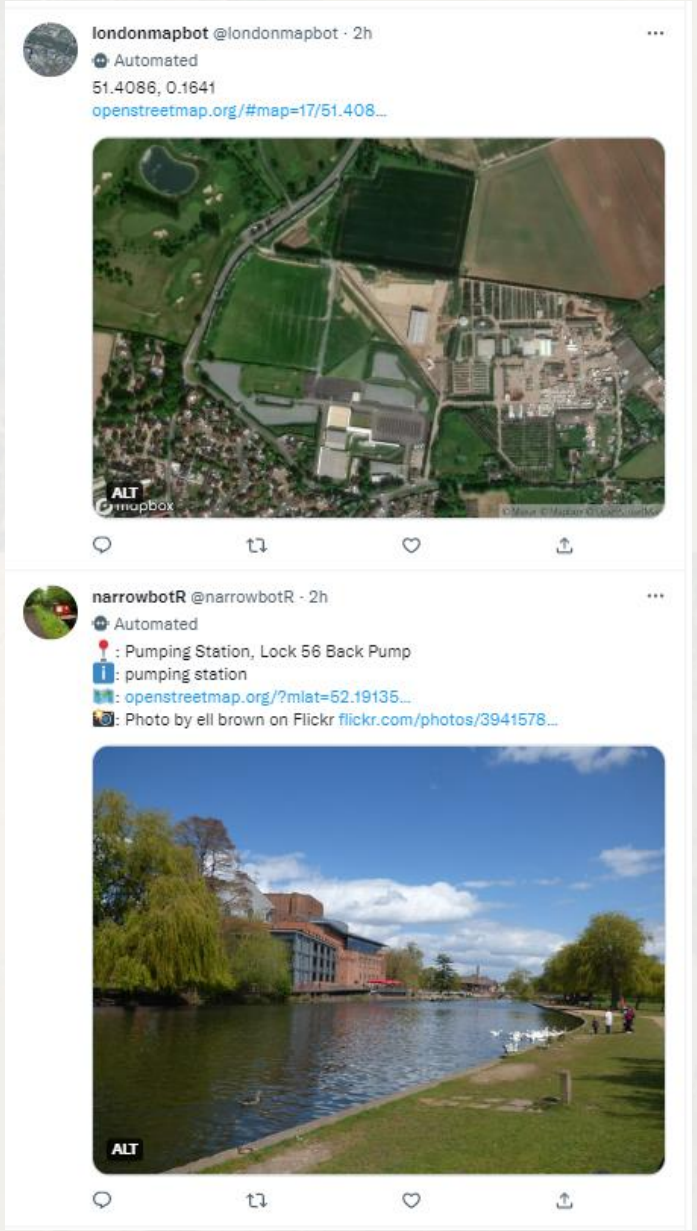
Purpose

Follow
Textures of Utah
@texturesofut
Satellite images and Wikipedia pages for random coordinates drawn from the Beehive State. Methodology in pinned tweet.
Utah, USA
github.com/eliason-j/isut...
Joined October 2021


Textures of Utah
@texturesofut
Hello, I'm a bot made using #rstats and @mattdray's @londonmapbot template.
9:04 PM · Oct 11, 2021 · Twitter Web App
Textures of Utah @texturesofut · Oct 11, 2021
Replying to @texturesofut
My tweets contain satellite images of areas approximately 1500 feet wide (good for about a twelfth of a square mile). They are randomly selected from a box drawn around Utah state lines.
1
Textures of Utah @texturesofut · Oct 11, 2021
Points are repeatedly checked against a .shp file until a point is selected from within state boundaries. An image corresponding with that point is then queried from the Mapbox API and posted to Twitter using the rtweet package.
1

Purpose

The mapbotverse
@mattdray
The mapbotverse
Bots that have used and improved code from @londonmapbot, or have been inspired by it.
Matt Dray @mattdray
25 Members
6 Followers
Following


londonmapbot @londonmapbot · 2h
Automated
51.4086, 0.1641
openstreetmap.org/#map=17/51.408...
ALT
narrowbotR @narrowbotR · 2h
Automated
: Pumping Station, Lock 56 Back Pump
: pumping station
: openstreetmap.org/?mlat=52.19135...
: Photo by ell brown on Flickr flickr.com/photos/3941578...
ALT

Purpose

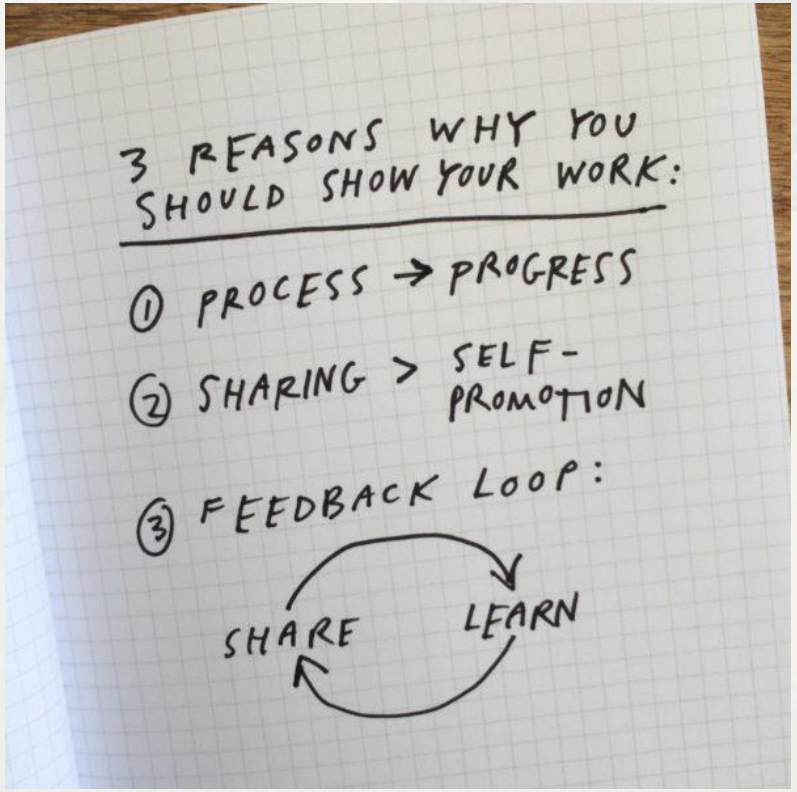
Purpose

2. Using new technologies:

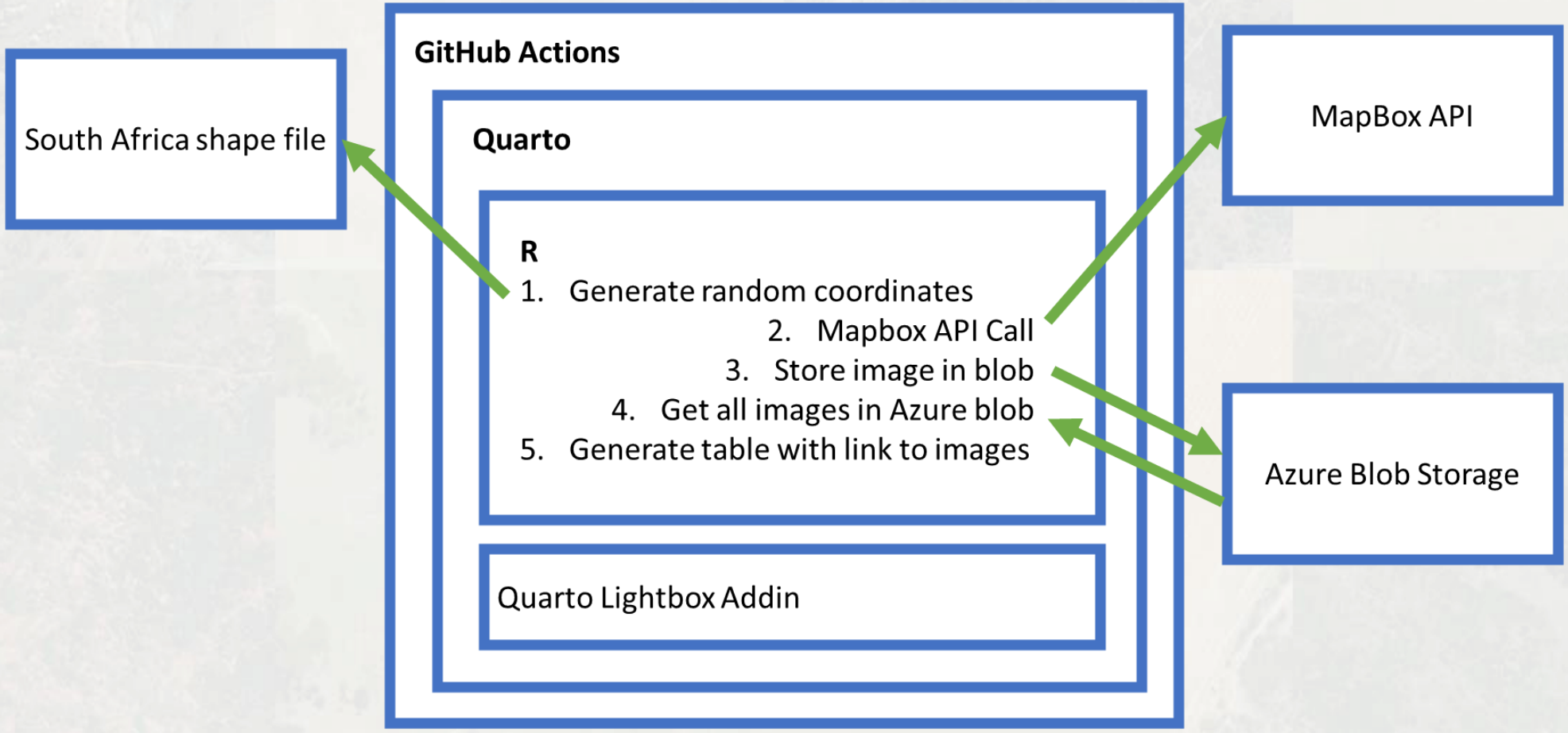
- Github Actions
- AzureStor
- Quarto
- Quarto Addins

Purpose

3. Working in public



Architecture



Github Actions

luisdza Update static.yml ✓ Latest commit 16d08d9 22 hours ago History

1 contributor

84 lines (68 sloc) | 2.33 KB Raw Blame

```yaml
# This is a basic workflow to help you get started with Actions

name: Render and deploy to Github Pages

# Controls when the workflow will run
on:
  # Triggers the workflow on push or pull request events but only for the "main" branch
  push:
    branches: [ "main" ]
  pull_request:
    branches: [ "main" ]

  # Allows you to run this workflow manually from the Actions tab
  workflow_dispatch:

  schedule:
    # run 4 times a day
    - cron: '0 */6 * * *'

# Sets permissions of the GITHUB_TOKEN to allow deployment to GitHub Pages
permissions:
  contents: read
  pages: write
  id-token: write

# Allow one concurrent deployment
concurrency:
```

AzureStor

Revolutions
Milestones in AI, Machine Learning, Data Science, and visualization with R and Python since 2008

« Because it's Friday: CGI you never knew was CGI | Main | AI, Machine Learning and Data Science Roundup: December 2018 »

December 18, 2018

AzureStor: an R package for working with Azure storage

by Hong Ooi, senior data scientist, Microsoft Azure

A few weeks ago, I introduced the AzureR family of packages for working with Azure in R. Since then, I've also written articles on how to use AzureRMR to interact with Azure Resource Manager, how to use AzureVM to manage virtual machines, and how to use AzureContainers to deploy R functions with Azure Kubernetes Service. This article is the next in the series, and covers AzureStor: an interface to Azure storage.

The Resource Manager interface: creating and deleting storage accounts

AzureStor implements an interface to Azure Resource Manager, which you can use manage storage accounts: creating them, retrieving them, deleting them, and so forth. This is done via the appropriate methods of the `az_resource_group` class. For example, the following code shows how you might create a new storage account from scratch.

```
library(AzureStor)

# get the resource group for the storage account
rg <- AzureRMR::az_rm$
    new(tenant="{tenant_id}", app="{app_id}", password="{password}")$
    get_subscription("{subscription_id}")$
    get_resource_group("myresourcegroup")

# create the storage account
# by default, this will be in the resource group's region
rg$create_storage_account("mynewstorage")
```

Without any options, this will create a storage account with the following parameters:

- General purpose account (all storage types supported)
- Locally redundant storage (LRS) replication
- Hot access tier (for blob storage)
- HTTPS connection required for access

You can change these by setting the arguments to `create_storage_account()`. For example, to create an account with geo-redundant storage replication and the default blob

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current events (126)
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images

Container

Search

Overview

Diagnose and solve problems

Access Control (IAM)

Settings

Shared access tokens

Access policy

Properties

Metadata

Upload | Change access level | Refresh | Delete | Change tier | Acquire lease | Break lease | View snapshots | Create snapshot

Authentication method: Access key (Switch to Azure AD User Account)
Location: images

Search blobs by prefix (case-sensitive)

Show deleted blobs

Add filter

Name	Modified	Access tier	Archive status	Blob type	Size	Lease state
20221107_1805_30.9969_-25.4022.jpeg	11/7/2022, 8:05:21 PM	Hot (Inferred)		Block blob	840.45 KiB	Available
20221107_1816_29.6962_-25.1942.jpeg	11/7/2022, 8:16:23 PM	Hot (Inferred)		Block blob	591.78 KiB	Available
20221107_2000_27.9084_-25.0931.jpeg	11/7/2022, 8:00:54 PM	Hot (Inferred)		Block blob	678.69 KiB	Available
20221107_2001_25.196_-33.6444.jpeg	11/7/2022, 8:01:43 PM	Hot (Inferred)		Block blob	631.04 KiB	Available
20221107_2002_25.5348_-26.3321.jpeg	11/7/2022, 8:02:12 PM	Hot (Inferred)		Block blob	423.92 KiB	Available
20221107_2002_27.1364_-33.261.jpeg	11/7/2022, 8:02:23 PM	Hot (Inferred)		Block blob	728.18 KiB	Available
20221107_2005_30.5791_-29.6237.jpeg	11/7/2022, 8:05:07 PM	Hot (Inferred)		Block blob	767.18 KiB	Available
20221108_0014_28.1653_-30.7688.jpeg	11/8/2022, 2:14:37 AM	Hot (Inferred)		Block blob	241.53 KiB	Available
20221108_0605_25.7927_-26.8523.jpeg	11/8/2022, 8:05:30 AM	Hot (Inferred)		Block blob	328.83 KiB	Available
20221108_0650_26.0145_-26.6399.jpeg	11/8/2022, 8:50:25 AM	Hot (Inferred)		Block blob	570.97 KiB	Available
20221108_0704_25.5754_-28.4238.jpeg	11/8/2022, 9:04:31 AM	Hot (Inferred)		Block blob	505.37 KiB	Available
20221108_0735_28.2025_-27.3989.jpeg	11/8/2022, 9:35:44 AM	Hot (Inferred)		Block blob	458.47 KiB	Available
20221108_0758_30.9982_-25.5574.jpeg	11/8/2022, 7:58:37 AM	Hot (Inferred)		Block blob	987.11 KiB	Available
20221108_0759_25.8751_-32.8012.jpeg	11/8/2022, 7:59:35 AM	Hot (Inferred)		Block blob	791.91 KiB	Available
20221108_0832_27.0084_-33.1555.jpeg	11/8/2022, 8:32:44 AM	Hot (Inferred)		Block blob	636.12 KiB	Available
20221108_0833_26.4995_-26.8624.jpeg	11/8/2022, 8:33:33 AM	Hot (Inferred)		Block blob	606.83 KiB	Available
20221108_0834_28.1867_-30.9225.jpeg	11/8/2022, 8:34:03 AM	Hot (Inferred)		Block blob	425.12 KiB	Available
20221108_0835_30.807_-28.1631.jpeg	11/8/2022, 8:35:13 AM	Hot (Inferred)		Block blob	595.74 KiB	Available
20221108_0835_30.8221_-28.4679.jpeg	11/8/2022, 8:35:43 AM	Hot (Inferred)		Block blob	455.35 KiB	Available

Microsoft Azure Storage Explorer

File Edit View Help

EXPLORER

Search for resources

Collapse All Refresh All

- Quick Access
- Emulator & Attached
- Microsoft Partner Network (luisd@syeop.co.za)
  - Storage Accounts
    - aerialmzansi
      - Blob Containers
        - $logs
        - images
      - File Shares
      - Queues
      - Tables
  - Disks
  - Data Lake Storage Gen1 (deprecated)

images | Get Started

Upload | Download | Open | Preview | New Folder | Select All | Copy | Paste | Clone | Delete | Undelete | Manage History | Folder Statistics | Refresh

Active blobs (default) | images

Name	Access Tier	Access Tier Last Modified	Last Modified	Blob Type	Content Type	Size	Status	Remaining Days	Deleted Time	Lease State	Disk Name	VM Name	Disk Type	Resource Group Name
20221107_1805_30.9969_-25.4022.jpeg	Hot (inferred)		2022/11/07 20:05	Block Blob	image/jpeg	840.45 KiB	Active							
20221107_1816_29.6962_-25.1942.jpeg	Hot (inferred)		2022/11/07 20:16	Block Blob	image/jpeg	591.78 KiB	Active							
20221107_2000_27.9084_-25.0931.jpeg	Hot (inferred)		2022/11/07 20:00	Block Blob	image/jpeg	678.69 KiB	Active							
20221107_2001_25.196_-33.6444.jpeg	Hot (inferred)		2022/11/07 20:01	Block Blob	image/jpeg	631.04 KiB	Active							
20221107_2002_25.5348_-26.3321.jpeg	Hot (inferred)		2022/11/07 20:02	Block Blob	image/jpeg	423.92 KiB	Active							
20221107_2002_27.1364_-33.261.jpeg	Hot (inferred)		2022/11/07 20:02	Block Blob	image/jpeg	728.18 KiB	Active							
20221107_2005_30.5791_-29.6237.jpeg	Hot (inferred)		2022/11/07 20:05	Block Blob	image/jpeg	767.18 KiB	Active							
20221108_0014_28.1653_-30.7688.jpeg	Hot (inferred)		2022/11/08 02:14	Block Blob	image/jpeg	241.53 KiB	Active							
20221108_0605_25.7927_-26.8523.jpeg	Hot (inferred)		2022/11/08 08:05	Block Blob	image/jpeg	328.83 KiB	Active							
20221108_0650_26.0145_-26.6399.jpeg	Hot (inferred)		2022/11/08 08:50	Block Blob	image/jpeg	570.97 KiB	Active							
20221108_0704_25.5754_-28.4238.jpeg	Hot (inferred)		2022/11/08 09:04	Block Blob	image/jpeg	505.37 KiB	Active							
20221108_0735_28.2025_-27.3989.jpeg	Hot (inferred)		2022/11/08 09:35	Block Blob	image/jpeg	458.47 KiB	Active							
20221108_0758_30.9982_-25.5574.jpeg	Hot (inferred)		2022/11/08 07:58	Block Blob	image/jpeg	987.11 KiB	Active							
20221108_0759_25.8751_-32.8012.jpeg	Hot (inferred)		2022/11/08 07:59	Block Blob	image/jpeg	791.91 KiB	Active							
20221108_0832_27.0084_-33.1555.jpeg	Hot (inferred)		2022/11/08 08:32	Block Blob	image/jpeg	636.12 KiB	Active							
20221108_0833_26.4995_-26.8624.jpeg	Hot (inferred)		2022/11/08 08:33	Block Blob	image/jpeg	606.83 KiB	Active							
20221108_0834_28.1867_-30.9225.jpeg	Hot (inferred)		2022/11/08 08:34	Block Blob	image/jpeg	425.12 KiB	Active							
20221108_0835_30.807_-28.1631.jpeg	Hot (inferred)		2022/11/08 08:35	Block Blob	image/jpeg	595.74 KiB	Active							
20221108_0835_30.8221_-28.4679.jpeg	Hot (inferred)		2022/11/08 08:35	Block Blob	image/jpeg	455.35 KiB	Active							
20221108_0838_25.4472_-28.4355.jpeg	Hot (inferred)		2022/11/08 08:38	Block Blob	image/jpeg	554.97 KiB	Active							
20221108_0838_30.723_-28.9457.jpeg	Hot (inferred)		2022/11/08 08:38	Block Blob	image/jpeg	822.91 KiB	Active							
20221108_0842_31.8126_-27.4579.jpeg	Hot (inferred)		2022/11/08 08:42	Block Blob	image/jpeg	993.62 KiB	Active							
20221108_0844_28.6611_-31.0653.jpeg	Hot (inferred)		2022/11/08 08:44	Block Blob	image/jpeg	653.45 KiB	Active							

Showing 1 to 29 of 29 cached items

Actions | Properties

URL	https://aerialmza
Custom Domain	
Type	Blob Container
HNS Enabled	false
Lease State	available
Lease Status	unlocked
Public Read Access	blob
Last Modified	Thursday, 27 Oct

Activities

Clear completed Clear successful

Quarto

Quarto

https://quarto.org

quarto Overview Get Started Guide Extensions Reference Gallery Blog Help

Welcome to Quarto

Quarto® is an open-source scientific and technical publishing system built on Pandoc

- Create dynamic content with Python, R, Julia, and Observable.
- Author documents as plain text markdown or Jupyter notebooks.
- Publish high-quality articles, reports, presentations, websites, blogs, and books in HTML, PDF, MS Word, ePub, and more.
- Author with scientific markdown, including equations, citations, crossrefs, figure panels, callouts, advanced layout, and more.

Get Started Guide

Hello, Quarto

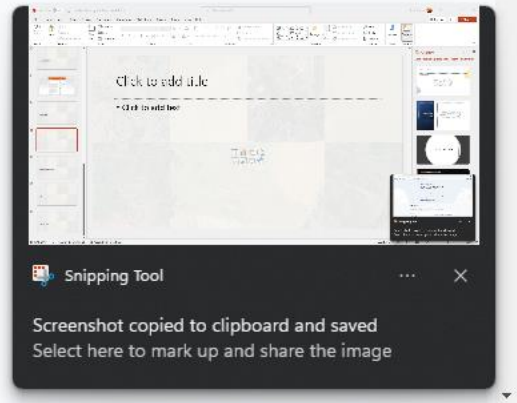
Python R Julia Observable

Weave together narrative text and code to produce elegantly formatted output. Quarto documents are fully reproducible. Use markdown with code cells executed via Jupyter (shown below) or render existing Jupyter notebooks.

```
---
title: "matplotlib demo"
format:
  html:
```

matplotlib demo

For a demonstration of a line plot on a polar axis, see Figure 1.



Quarto Addins

Quarto Extensions
Shortcodes & Filters
Journal Articles
Custom Formats
Revealjs Extensions
Managing Extensions
Creating Extensions
Overview
Lua Development
Lua API Reference
Distribution
Shortcodes
Filters
Journal Articles
Custom Formats
Revealjs Plugins
Project Types
Starter Templates

Quarto Extensions

Quarto v1.2 Required
If you are using or developing extensions you should update to Quarto v1.2, which includes significant improvements to the extension API. Many extensions are also likely to require Quarto v1.2.

Extensions are a powerful way to modify and extend the behavior of Quarto. Below is a listing of available extensions (please let us know if you have an extension you'd like to see added to the list).

See the articles on Creating Extensions to learn how to develop your own extensions.

Shortcodes and Filters

Filter

Name	Description	Author
lightbox	Create lightbox treatments for images in your HTML documents.	quarto-ext
molstar	Shortcode to embed proteins and trajectories with Mol*.	jmbuhr
shinylive	This extension lets you embed Shinylive applications in a Quarto document.	quarto-ext
abstract-section	Write an article abstract in a normal section, not the YAML metadata.	pandoc-ext
social-share	Add buttons to share articles on various social media platforms.	schochastics

GLightbox | A touchable pure Ja

https://biati-digital.github.io/glightbox/

GLightbox

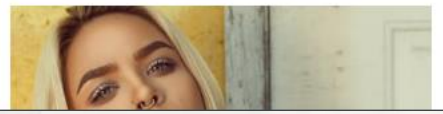
EXAMPLES INFO LICENSE DOWNLOAD

GLightbox.

Code name "Gie" A touchable Pure Javascript lightbox with mobile and video support.

DOWNLOAD VIEW SOURCE

Simple Image Gallery



sf

sf:
SPATIAL DATA ... SIMPLIFIED.
ATTRIBUTES + GEOMETRIES
1 Y 2.6 blue
6 N 5.0 red
12 Y 11.9 green
Y 13.8 blue
N 21.7 red
GLUE
tape
Sticky geometries: for people who love their maps and sanity.
Horst '18

```
52            version: pre-release
53
54        - uses: r-lib/actions/setup-r@v2
55          with:
56            use-public-rspm: true
57
58        - name: Install GDAL required for SF
59          if: runner.os == 'Linux'
60          run: sudo apt-get update -y && sudo apt-get install libudunits2-dev libgdal-dev libgeos-dev libproj-dev
61
62        - uses: r-lib/actions/setup-r-dependencies@v2
63
64        - name: Render Quarto Project
65          uses: quarto-dev/quarto-actions/render@v2
66          with:
67            to: html # If set, it will be equivalent to `quarto render --to html`
68
69        - name: Upload artifact
70          uses: actions/upload-pages-artifact@v1
71          with:
72            path: ./_output
73
74    # Deployment job
75    deploy:
```

Wrap up

Mzansi from the air