
PhotoScript

Release 0.0.22

Rhet Turnbull

Sep 18, 2020

CONTENTS

1	PhotoScript	1
1.1	What is PhotoScript	1
1.2	Installation	1
1.3	Example	1
1.4	See Also	2
2	Documentation	3
2.1	photoscript package	3
2.1.1	photoscript module	3
3	Indices and tables	11
	Index	13

PHOTOSCRIPT

1.1 What is PhotoScript

PhotoScript provides a python wrapper around Apple Photos applescript interface. With PhotoScript you can interact with Photos using python. Runs only on MacOS. Tested on MacOS Catalina.

1.2 Installation

PhotoScript uses setuptools, thus simply run:

```
python3 setup.py install
```

1.3 Example

```
""" Simple example showing use of photoscript """

import photoscript

photoslib = photoscript.PhotosLibrary()

photoslib.activate()
print(f"Running Photos version: {photoslib.version}")

album = photoslib.album("Album1")
photos = album.photos

for photo in photos:
    print(f"{photo.title}, {photo.description}, {photo.keywords}")

new_album = photoslib.create_album("New Album")
photoslib.import_photos(["/Users/rhet/Downloads/test.jpeg"], album=new_album)

photoslib.quit()
```

1.4 See Also

- [osxphotos](#): Python package that provides read-only access to the Photos library including all associated meta-data.

DOCUMENTATION

2.1 photoscript package

2.1.1 photoscript module

class `photoscript.PhotosLibrary`

activate ()

activate Photos.app

album (**name*, *uuid=None*, *top_level=False*)

Album instance by name or id

Parameters

- **name** – name of album
- **uuid** – id of album
- **top_level** – if True, searches only top level albums; default = False

Returns Album object or None if album could not be found

Raises **ValueError** if both **name** and **id** passed or neither passed. –

Must pass only name or id but not both. If more than one album with same name, returns the first one found.

album_names (*top_level=False*)

List of album names in the Photos library

Parameters **top_level** – if True, returns only top-level albums otherwise also returns albums in sub-folders; default is False

albums (*top_level=False*)

list of Album objects for all albums

create_album (*name*, *folder=None*)

creates an album

Parameters

- **name** – name of new album
- **folder** – Folder object in which to create new album. If None, creates top-level album. Default is None.

Returns Album object for newly created album

Raises `AppleScriptError` if error creating the album –

`create_folder` (*name*, *folder=None*)
creates a folder

Parameters

- **name** – name of new folder
- **folder** – Folder object in which to create the new folder. If None, creates top-level folder. Default is None.

Returns Folder object for newly created folder

Raises `AppleScriptError` if folder cannot be created –

`delete_album` (*album*)
deletes album (but does not delete photos in the album)

Parameters **album** – an Album object for album to delete

`delete_folder` (*folder*)
Deletes folder

Parameters **folder** – a Folder object for folder to delete

`property favorites`
Album object for the Favorites album

`folder` (**name*, *uuid=None*, *top_level=True*)
Folder instance by name or uuid

Parameters

- **name** – name of folder
- **uuid** – id of folder
- **top_level** – if True, only searches top level folders by name; default is True

Returns Folder object or None if folder could not be found

Raises `ValueError` if both name and id passed or neither passed. –

Must pass only name or id but not both. If more than one folder with same name, returns first one found.

`folder_by_path` (*folder_path*)
Return folder in the library by path

Parameters **folder_path** – list of folder names in descending path order, e.g. ["Folder", "SubFolder1", "SubFolder2"]

Returns Folder object for folder at folder_path or None if not found

`folder_names` (*top_level=False*)
List of folder names in the Photos library

Parameters **top_level** – if True, returns only top-level folders otherwise also returns sub-folders; default is False

`folders` (*top_level=True*)
list of Folder objects for all folders

`property frontmost`
True if Photos.app is front most app otherwise False

property hidden

True if Photos is hidden (or not running), False if Photos is visible

hide()

Tell Photos to hide its window

import_photos (*photo_paths*, *album=None*, *skip_duplicate_check=False*)

import photos

Parameters

- **photo_paths** – list of file paths to import as str or pathlib.Path
- **album** – optional, Album object for album to import into
- **skip_duplicate_check** – if True, Photos will not check for duplicates on import, default is False.

Returns list of Photo objects for imported photos

NOTE: If you attempt to import a duplicate photo and `skip_duplicate_check != True`, Photos will block with drop-down sheet until the user clicks “Cancel, Import, or Don’t Import.”

make_album_folders (*album_name*, *folder_path*)

Make album in a folder path. If either the album or any component of the folder path doesn’t exist, it will be created. If album or folder path does exist, no duplicate is created. Folder path is created recursively if needed.

Parameters

- **album_name** – name of album to create. If album already exists, returns existing album.
- **folder_path** – list of folder names in descending path order, e.g. [“Folder”, “SubFolder1”, “SubFolder2”].

Returns Album object.

Raises

- **ValueError** if *folder_path* is empty or *album_name* is None. –
- **TypeError** if *folder_path* is not a list. –

make_folders (*folder_path*)

Recursively makes folders and subfolders. Works similar to [os.makedirs](#). If any component of *folder_path* already exists, does not raise error.

Parameters **folder_path** – list of folder names in descending path order, e.g. [“Folder”, “SubFolder1”, “SubFolder2”]

Returns Folder object for the final sub folder

Raises

- **ValueError** if *folder_path* is empty –
- **TypeError** if *folder_path* is not a list –

property name

name of Photos.app

photos (*search=None*, *uuid=None*, *range_=None*)

Returns a generator that yields Photo objects for media items in the library.

Parameters

- **search** – optional text string to search for (returns matching items)
- **uuid** – optional list of UUIDs to get
- **range** – optional list of [start, stop] sequence of photos to get

Returns Generator that yields Photo objects

Raises

- **ValueError** if more than one of **search**, **uuid**, **range** passed or invalid **range** –
- **TypeError** if list not passed for **range** –

Note: `photos()` returns a generator instead of a list because retrieving all the photos from a large Photos library can take a very long time—on my system, the rate is about 1 per second; this is limited by the Photos AppleScript interface and I’ve not found anyway to speed it up. Using a generator allows you process photos individually rather than waiting, possibly hours, for Photos to return the results.

range_ works like python’s range function. Thus `range_=[0,4]` will return Photos 0, 1, 2, 3; `range_=[10]` returns the first 10 photos in the library; **range_** start must be in range 0 to `len(PhotosLibrary())-1`, stop in range 1 to `len(PhotosLibrary())`. You may be able to optimize the speed by which photos are return by chunking up requests in batches of photos using **range_**, e.g. request 10 photos at a time.

quit ()

quit Photos.app

property running

True if Photos is running, otherwise False

property selection

List of Photo objects for currently selected photos or [] if no selection

property version

version of Photos.app as str

class `photoscript.Album(uuid)`

add (*photos*)

add photos from the library to album

Parameters **photos** – list of Photo objects to add to album

Returns list of Photo objects for added photos

export (*export_path*, *original=False*, *overwrite=False*, *timeout=120*)

Export photos in album to path

Parameters

- **photo** – Photo object to export
- **export_path** – path to export to
- **original** – if True, export original image, otherwise export current image; default = False
- **overwrite** – if True, export will overwrite a file of same name as photo in `export_path`; default = False

- **timeout** – number of seconds to wait for Photos to complete export (for each photo) before timing out; default = 120

Returns List of full paths of exported photos. There may be more than one photo exported due to live images and burst images.

Raises ValueError if export_path is not a valid directory –

Note: Photos always exports as high-quality JPEG unless original=True. If original=True, will export all burst images for burst photos and live movie for live photos. If original=False, only the primary image from a burst set will be exported for burst photos and the live movie component of a live image will not be exported, only the JPEG component.

import_photos (*photo_paths*, *skip_duplicate_check=False*)
import photos

Parameters

- **photos** – list of file paths to import
- **skip_duplicate_check** – if True, Photos will not check for duplicates on import, default is False

Returns list of Photo objects for imported photos

property name
name of album (read/write)

property parent
Return parent Folder object

property parent_id
parent container id

path_str (*delim='/'*)

Return internal library path to album as string. e.g. “Folder/SubFolder/AlbumName”

Parameters delim – character to use as delimiter between path elements; default is “/”

Raises ValueError if delim is not a single character –

photos ()
list of Photo objects for photos contained in album

remove (*photos*)

Remove photos from album. Note: Photos does not provide a way to remove photos from an album via AppleScript. This method actually creates a new Album with the same name as the original album and copies all photos from original album with exception of those to remove to the new album then deletes the old album.

Parameters photos – list of Photo objects to remove

Returns new Album object for the new album with photos removed.

remove_by_id (*photo_ids*)

Remove photos from album. Note: Photos does not provide a way to remove photos from an album via AppleScript. This method actually creates a new Album with the same name as the original album and copies all photos from original album with exception of those to remove to the new album then deletes the old album.

Parameters `photo_ids` – list of photo ids to remove

Returns new Album object for the new album with photos removed.

property `title`

title of album (alias for `Album.name`)

property `uuid`

UUID of Album (read only)

class `photoscript.Folder` (*uuid*)

album (*name*)

Return Album object contained in this folder for album named *name* or `None` if no matching album

property `albums`

list of Album objects for albums contained in folder

create_album (*name*)

Creates an album in this folder

Parameters `name` – name of new album

Returns Album object for newly created album

create_folder (*name*)

creates a folder in this folder

Returns Folder object for newly created folder

folder (*name*)

Folder object for first subfolder folder named *name*.

Parameters `name` – name of folder to to return

Returns Folder object for first subfolder who's name matches *name* or `None` if not found

property `name`

name of folder

property `parent`

Return parent Folder object

property `parent_id`

parent container id

path ()

Return list of Folder objects this folder is contained in. `path()[0]` is the top-level folder this folder is contained in and `path()[-1]` is the immediate parent of this folder. Returns empty list if folder is not contained in another folders.

path_str (*delim*='/')

Return internal library path to folder as string. e.g. "Folder/SubFolder"

Parameters `delim` – character to use as delimiter between path elements; default is "/"

Raises `ValueError` if `delim` is not a single character –

property `subfolders`

list of Folder objects for immediate sub-folders contained in folder

property title
title of folder (alias for Folder.name)

property uuid
UUID of folder

class `photoscript.Photo(uuid)`

property altitude
GPS altitude of photo in meters

property date
date of photo as timezone-naive datetime.datetime object

property description
description of photo

duplicate()
duplicates the photo and returns Photo object for the duplicate

export (*export_path*, *original=False*, *overwrite=False*, *timeout=120*)
Export photo

Parameters

- **photo** – Photo object to export
- **export_path** – path to export to
- **original** – if True, export original image, otherwise export current image; default = False
- **overwrite** – if True, export will overwrite a file of same name as photo in export_path; default = False
- **timeout** – number of seconds to wait for Photos to complete export before timing out; default = 120

Returns List of full paths of exported photos. There may be more than one photo exported due to live images and burst images.

Raises ValueError if export_path is not a valid directory –

Note: Photos always exports as high-quality JPEG unless original=True. If original=True, will export all burst images for burst photos and live movie for live photos. If original=False, only the primary image from a burst set will be exported for burst photos and the live movie component of a live image will not be exported, only the JPEG component.

property favorite
return favorite status (boolean)

property filename
filename of photo

property height
height of photo in pixels

property keywords
list of keywords for photo

property location
The GPS latitude and longitude, in a tuple of 2 numbers or None. Latitude in range -90.0 to 90.0, longitude in range -180.0 to 180.0.

property name

name of photo

property title

title of photo (alias for name)

property uuid

UUID of Photo

property width

width of photo in pixels

INDICES AND TABLES

- `genindex`
- `modindex`
- `search`

INDEX

A

`activate()` (*photoscript.PhotosLibrary method*), 3
`add()` (*photoscript.Album method*), 6
`Album` (*class in photoscript*), 6
`album()` (*photoscript.Folder method*), 8
`album()` (*photoscript.PhotosLibrary method*), 3
`album_names()` (*photoscript.PhotosLibrary method*), 3
`albums()` (*photoscript.Folder property*), 8
`albums()` (*photoscript.PhotosLibrary method*), 3
`altitude()` (*photoscript.Photo property*), 9

C

`create_album()` (*photoscript.Folder method*), 8
`create_album()` (*photoscript.PhotosLibrary method*), 3
`create_folder()` (*photoscript.Folder method*), 8
`create_folder()` (*photoscript.PhotosLibrary method*), 4

D

`date()` (*photoscript.Photo property*), 9
`delete_album()` (*photoscript.PhotosLibrary method*), 4
`delete_folder()` (*photoscript.PhotosLibrary method*), 4
`description()` (*photoscript.Photo property*), 9
`duplicate()` (*photoscript.Photo method*), 9

E

`export()` (*photoscript.Album method*), 6
`export()` (*photoscript.Photo method*), 9

F

`favorite()` (*photoscript.Photo property*), 9
`favorites()` (*photoscript.PhotosLibrary property*), 4
`filename()` (*photoscript.Photo property*), 9
`Folder` (*class in photoscript*), 8
`folder()` (*photoscript.Folder method*), 8
`folder()` (*photoscript.PhotosLibrary method*), 4
`folder_by_path()` (*photoscript.PhotosLibrary method*), 4

`folder_names()` (*photoscript.PhotosLibrary method*), 4
`folders()` (*photoscript.PhotosLibrary method*), 4
`frontmost()` (*photoscript.PhotosLibrary property*), 4

H

`height()` (*photoscript.Photo property*), 9
`hidden()` (*photoscript.PhotosLibrary property*), 4
`hide()` (*photoscript.PhotosLibrary method*), 5

I

`import_photos()` (*photoscript.Album method*), 7
`import_photos()` (*photoscript.PhotosLibrary method*), 5

K

`keywords()` (*photoscript.Photo property*), 9

L

`location()` (*photoscript.Photo property*), 9

M

`make_album_folders()` (*photoscript.PhotosLibrary method*), 5
`make_folders()` (*photoscript.PhotosLibrary method*), 5

N

`name()` (*photoscript.Album property*), 7
`name()` (*photoscript.Folder property*), 8
`name()` (*photoscript.Photo property*), 9
`name()` (*photoscript.PhotosLibrary property*), 5

P

`parent()` (*photoscript.Album property*), 7
`parent()` (*photoscript.Folder property*), 8
`parent_id()` (*photoscript.Album property*), 7
`parent_id()` (*photoscript.Folder property*), 8
`path()` (*photoscript.Folder method*), 8
`path_str()` (*photoscript.Album method*), 7
`path_str()` (*photoscript.Folder method*), 8

`Photo` (*class in photoscript*), 9
`photos()` (*photoscript.Album method*), 7
`photos()` (*photoscript.PhotosLibrary method*), 5
`PhotosLibrary` (*class in photoscript*), 3

Q

`quit()` (*photoscript.PhotosLibrary method*), 6

R

`remove()` (*photoscript.Album method*), 7
`remove_by_id()` (*photoscript.Album method*), 7
`running()` (*photoscript.PhotosLibrary property*), 6

S

`selection()` (*photoscript.PhotosLibrary property*), 6
`subfolders()` (*photoscript.Folder property*), 8

T

`title()` (*photoscript.Album property*), 8
`title()` (*photoscript.Folder property*), 8
`title()` (*photoscript.Photo property*), 10

U

`uuid()` (*photoscript.Album property*), 8
`uuid()` (*photoscript.Folder property*), 9
`uuid()` (*photoscript.Photo property*), 10

V

`version()` (*photoscript.PhotosLibrary property*), 6

W

`width()` (*photoscript.Photo property*), 10