

GPS_Image_Sorter.vbs a Visual Basic Script to Sort Image files by GPS Exif
Metadata.

For Windows 10, 64 bit

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Acknowledgments

Exiftool

This script uses ExifTool by Phil Harvey to extract the metadata from the images. Click here, <https://exiftool.org/> for more information.

Tutorial for Exiftool

Click here <https://youtu.be/S6v-Cg0fQbQ> for a tutorial on Exiftool.

GeoDataSource™.

This script uses the free code provided by GeoDataSource™ to calculate distance.

GeoDataSource™ provides free distance calculation using latitude and longitude in different programming languages. You can get the free sample codes by clicking this link:
<https://www.geodatasource.com/developers/vb>

Why would I use this?

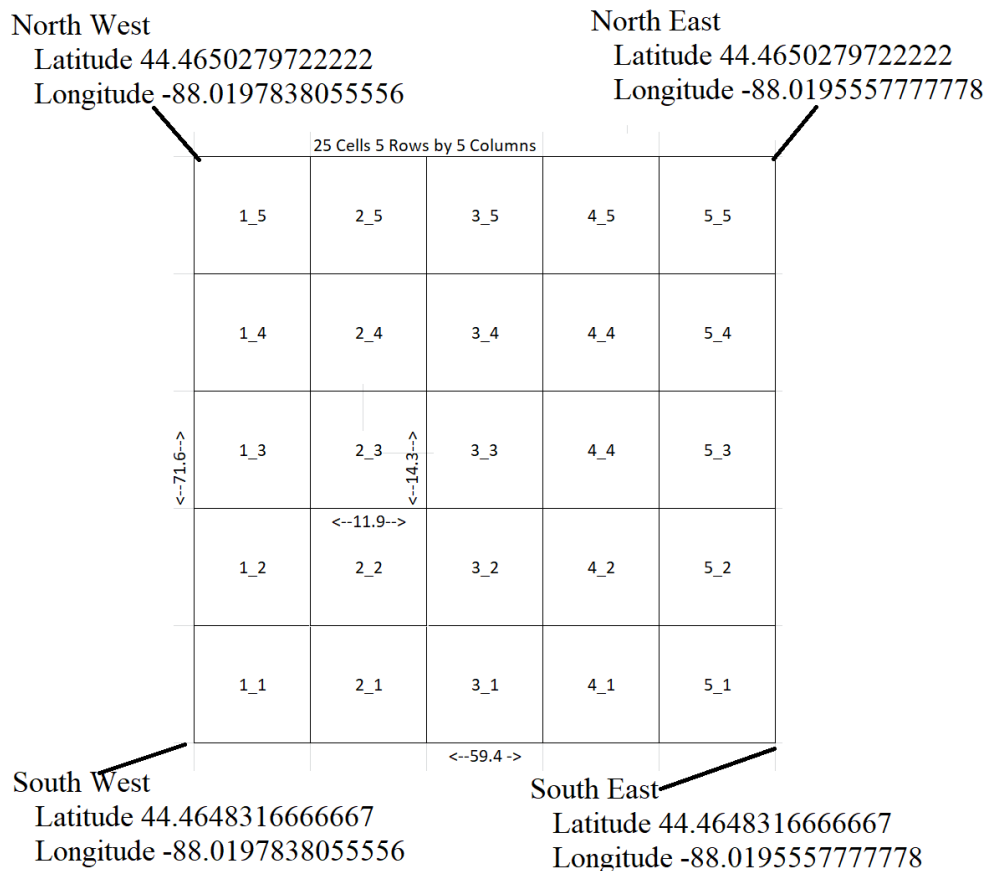
GPS_Image_Sorter.vbs sorts images based on their GPS data. It groups pictures taken in the same area together. Designed for drone images but will work for any photos that have GPS data all from the same general area.

How are the images organized?

GPS_Image_Sorter.vbs reads GPS data from the file Exif_Image_Data.csv created with Exiftool.exe to find the minimum and maximum values of latitude, longitude, and altitude from the images.

Latitude and longitude values define a rectangular area laid out south to north and west to east and dividing it into cells. To match an image to a cell GPS Exif data is compared to latitude and longitude of the cell borders.

When the prompt "Look for Overview images (highest Altitude images)" is answered yes, images at higher altitude labeled as overview images.
The illustration below represents an area covering 71.6 feet south to north and 59.4 feet west to east. It is divided into 25 cells 14.3 feet south to north and 11.9 feet west to east.



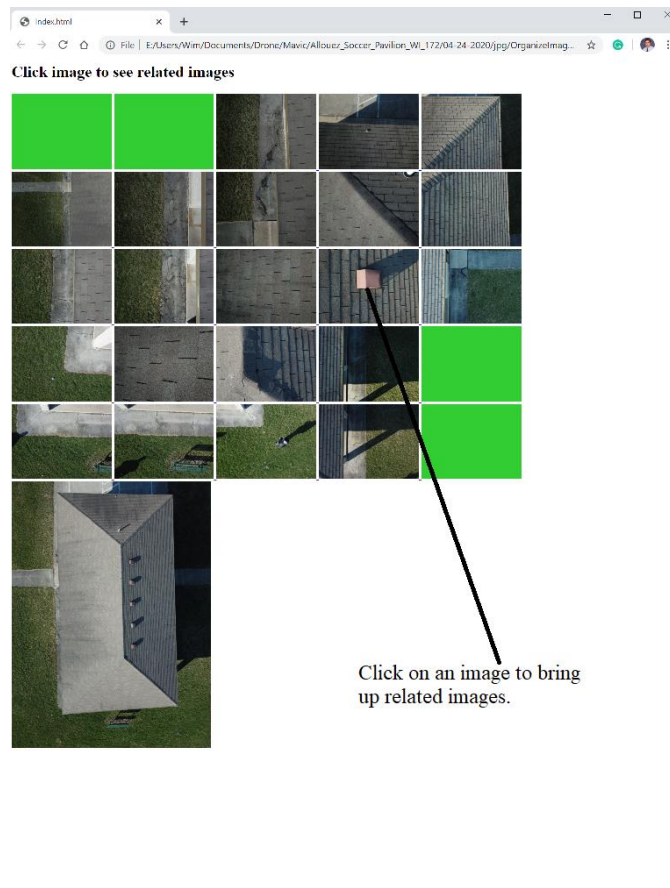
How are the images Presented

Running the script creates a new file Index.html opened by a web browser with images aligned in a grid pattern.

The images processed should all be the same size and orientation. Rotate overview images of whatever direction works best. I used Image MS Photo to change the rotation of the image used as the overview image. The overview image is the larger image showing the entire roof.

Click on an image to bring up a second-page showing related images all assigned to the same cell. Click on an image to see it full screen. Optionally images can be copied to a new folder Pics using the naming convention Cell_OriginalFileName.JPG. For example, a picture with the file name DJI_0076.JPG assigned to cell 3_2 is named 3_2_DJI_0076.JPG The green represents areas with no images.

Click on any image to bring up related images.



Related Images

Click on one of the related images to view it full size. I have selected the one on the right. Use the back arrow on your browser to go back arrow to go back to the main page.

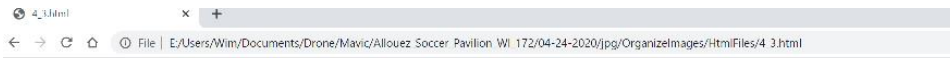
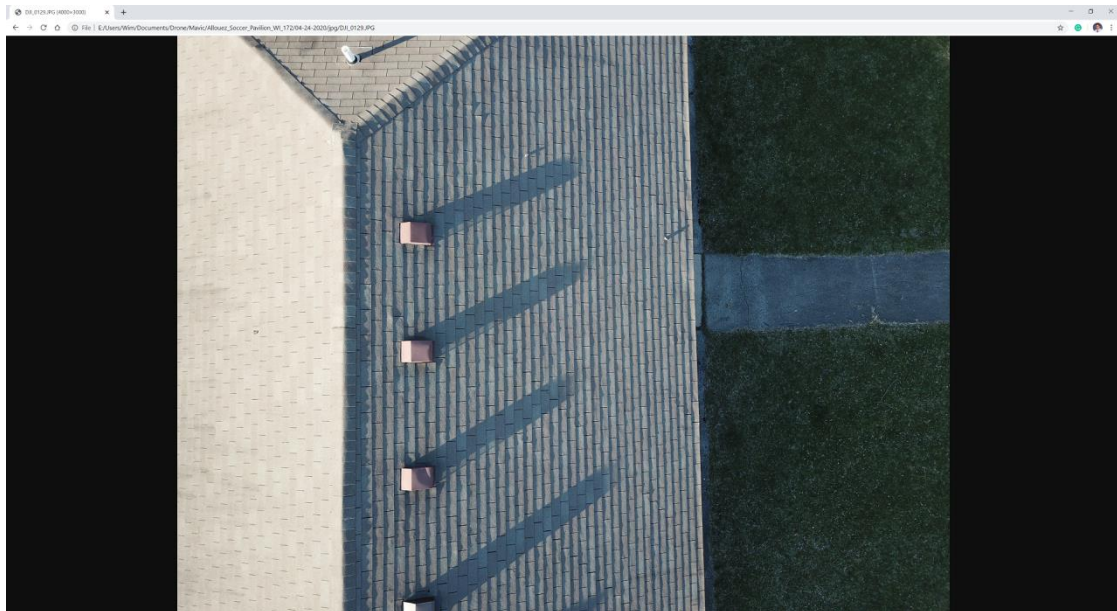


Image Clicked

Image Shown Full Size



How do I use it?

The script ignores images without latitude or longitude data. Not enough images will skew results. Use the Boundaries_of_Mission.kml and Boundaries_of_Mission.txt files to check that the images are processed correctly.

1. Copy the zip file GPS_Image_Sorter.zip to the same folder as the images to be sorted.
2. Right-click to bring up the options menu. Check the box "Show extracted files when completed." Files will unzip to the folder GPS_Image_Sorter. Keep this as a subfolder of the folder with images to sort.
3. Double click on GPS_Image_Sorter.vbs after about a second; a prompt will come up "Find Overview Images" select yes if to find images that taken at a high altitude.
4. The next prompt will ask, "Copy pictures and rename images to new folder Pics" selecting yes, will create a new folder named Pics, copy and rename the images with the naming convention Cell_OriginalFileName.JPG.
5. When completed, the file Index.html opens in your default web browser.
6. Click on Boundaries_of_Mission.kml to see the place marks in Google Earth. The place marks should outline the area where the pictures were taken.
7. Click Boundaries_of_Mission.txt open in Notepad if you don't have Google Earth installed. Boundaries_of_Mission.txt has the same information Boundaries_of_Mission.kml. Additionally, it will tell which images defined the rectangular area.

File and Folder Listing

Main Files

GPS_Image_Sorter.vbs - The main file double click this to start

Exiftool – Reads Exif data from images.

Instructions_for_GPS_Image_Sorter.pdf - This Document.

Files Created after GPS_Image_Sorter.vbs executes.

Exif_Image_Data.csv – A comma-separated value file with Exif metadata for the images processed

Index.html – An Html file opened in a web browser to display the images on a grid.

Boundaries_of_Mission.kml – Click on to open in Google Earth to display the corners of the rectangular area where the images were taken as placemarks.

Boundaries_of_Mission.txt – A text file with the following information size of the area, size of cells, latitude, and longitude of corners; and file names of the images to create the north, south, east, and west boundaries.

Folders

GPS_Image_Sorter – This is the main folder that holds everything.

Pics – A subfolder of GPS_Image_Sorter holds images copied and renamed with the naming convention Cell_OriginalFileName.JPG.

HTML files – A subfolder of GPS_Image_Sorter contains HTML files used to display the related images.

Customizing

Right-click on the script then left-click on edit to open in Notepad. Six constant values may be changed. To change the color of the blank images from LimeGreen to Aqua, replace "LimeGreen" with "Aqua".

Change the grid size of the images by changing the values of Const Number_of_Image_Rows and Number_of_Image_Columns.

Index.Html sets the size of images on the displayed on the grid with the constant Scale_of_grid_image.

To change the size of the overview image displayed under the grid of images, change the value of Scale_of_overview_images .

The altitude for setting overview images is with the following formula:

MaximumAltitude -	$\frac{\text{MaximumAltitude} - \text{MinimumAltitude}}{\text{Minimum_Altitude_of_Overview_images}}$
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List of constants

Const BlankColor = "LimeGreen"

Const Number_of_Image_Rows = 5

Const Number_of_Image_Columns = 5

Const Scale_of_grid_images = "15%"

Const Scale_of_overview_image = "30%"

Const Minimum_Altitude_of_Overview_images = 4

You are free to use this code

This script written in Visual Basic Script is free to be modified for your use. VB Script is a part of Windows. VB Script files are text files with the file extension .vbs written in the VB Script programming language.

To edit VB Script files, use Notepad or script editor such as VbsEdit <https://www.vbsedit.com/>. I used VbsEdit to create this.

The distance calculation use code from GeoDataSource.com to get the original code use this link:

<https://www.geodatasource.com/developers/vb>