Street View Dataset

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The dataset contains 62,058 high quality Google Street View images. The images cover the downtown and neighboring areas of Pittsburgh, PA; Orlando, FL and partially Manhattan, NY. Accurate GPS coordinates of the images and their compass direction are provided as well.

For each Street View placemark (i.e. each spot on one street), the 360° spherical view is broken down into 4 side views and 1 upward view. There is one additional image per placemark which shows some overlaid markers, such as the address, name of streets, etc.

Naming format:

The name of the images has the following format: XXXXXX_Y.jpg

XXXXXX is the identifier of the placemark. There are total number of 10343 placemarks in this dataset, so XXXXXX ranges from 000001 to 10343.

Y is the identifier of the view. 1, 2, 3 and 4 are the side views and 5 is the upward view. 0 is the view with markers overlaid (explained above). Thus, there are total number of 6 images per placemark.

GPS Coordinates & Compass Direction:

The Matlab file 'GPS_Long_Lat_Compass.mat' includes the GPS coordinates and compass direction of each placemark. The row number XXXXXX corresponds to the placemark number XXXXXX. The 1st and 2nd columns are the latitude and longitude values. The 3rd column is the compass direction (in degrees from North towards West) of the view number 4. The rest of the side views are exactly 90° apart from the view number 4.

The file 'Cartesian_Location_Coordinates.mat' contains the location coordinates in a metric Cartesian system (unlike longitude and latitude). The Euclidean distance between such XYZ coordinates of two points is the actual distance (in meters) between them.

GIST & Color Histogram:

The file 'GIST.mat' includes precomputed GIST features of the images. The file 'Color_hist.mat' contains the 60 dimensional RGB color histogram of the images (20 dimensional histogram per channel). In each of these files, the row number XXXXXXY corresponds to the image XXXXXX_Y.jpg.

Citation:

Please cite the following paper for which this data was collected (partially):

- *Image Geo-localization based on Multiple Nearest Neighbor Feature Matching using Generalized Graphs*. Amir Roshan Zamir and Mubarak Shah. **IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)**, 2014.

Additional References:

The following papers are also related to the topic of geo-localization and geo-spatial analysis of visual data:

- GPS-Tag Refinement using Random Walks with an Adaptive Damping Factor, Amir Roshan Zamir, Shervin Ardeshir and Mubarak Shah, IEEE International Conference on Computer Vision and Pattern Recognition (**CVPR**), 2014.
- City Scale Geo-spatial Trajectory Estimation of a Moving Camera, Gonzalo Vaca, Amir Roshan Zamir and Mubarak Shah, IEEE International Conference on Computer Vision and Pattern Recognition (**CVPR**), 2012.
- Accurate Image Localization Based on Google Maps Street View, Amir Roshan Zamir and Mubarak Shah, European Conference on Computer Vision (**ECCV**), 2010.
- Visual Business Recognition - A Multimodal Approach, Amir Roshan Zamir, Afshin Dehghan and Mubarak Shah. ACM International Conference on Multimedia (**ACM Multimedia**), 2013.

Access Link: http://www.cs.ucf.edu/~aroshan/index_files/Dataset_PitOrlManh/

Question, suggestions, and comments: Please contact Amir. R. Zamir