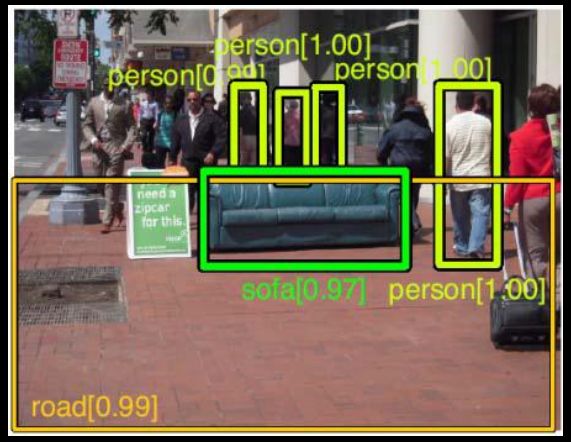
WEB-ASSISTED OBJECT DETECTION FOR OUTDOOR SCENES

Amir Zamir and Stephanie Morris

BASIC IDEA


you need a zipcar for this.


showcase[0.82]
curtain[0.86]
curtain[0.90]
floor[0.90]
grass[0.86]
car[0.92]


person[1.00]
person[1.00]
sofa[0.97]
person[1.00]
road[0.99]

CHOOSING A CITY

- List of 13 objects that we look for in the picture:
- Fire Hydrants, Traffic Lights, Bus Stops
- Subway Station Entrances, Trees, Grass
- Lakes, Buildings, Roads, Road Signs
- Sidewalk, Lampposts, Benches, Cell Towers

PREVIOUS TABLE

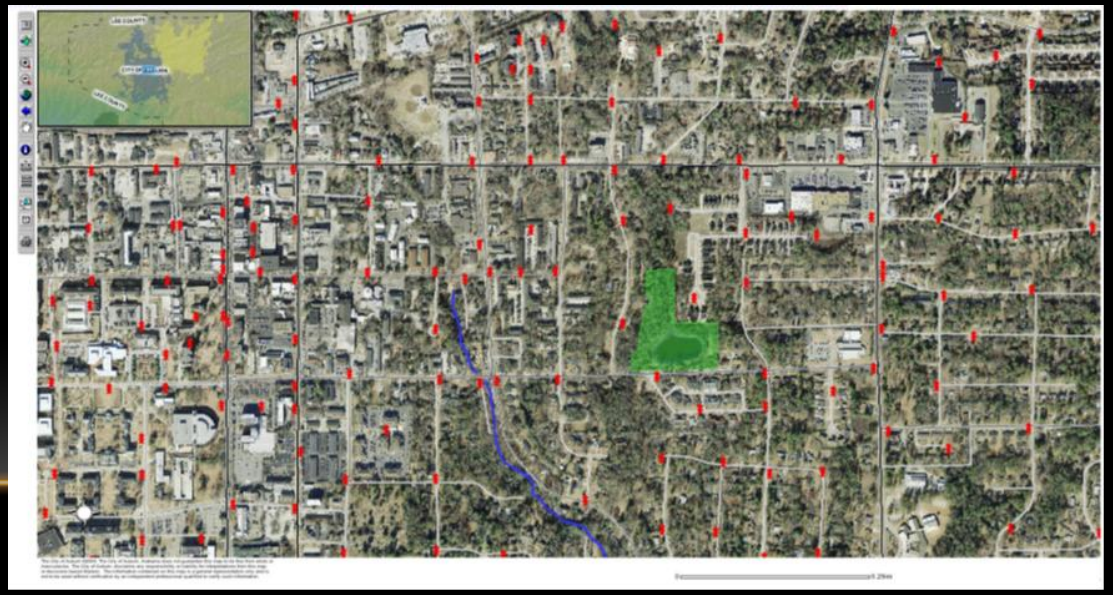
Resource	Type (program/data)	Objects Included/Status
Peachtree	Data	Hydrants, Roads, Lakes
DC	Data	Hydrants
Auburn	Data	Roads, Lakes, Hydrants, Cell Towers
Lake County	Data	Hydrants, Lakes
Portland	Data	Unknown
New York City	Data	
Canary Islands	Data	Unknown
Google Maps	Program	Currently Using
ArcGIS Explorer	Program	Being used by some of our data resources

Location	Website (map and/or data)	Objects
Peachtree, GA	http://maps.peachtree-city.org/iMap/	Hydrants, Roads, Lakes
Washington, DC	http://www.gearthblog.com/blog/archives/2008/09/fire_hydrants_in_google_earth.html	Hydrants
Auburn, AL	http://gis.auburnalabama.org/website/AuburnIMS/viewer.htm	Roads, Lakes, Hydrants, Cell Towers
Lake County, FL	http://gis.lakecountyfl.gov/gisweb/	Hydrants, Lakes
Portland, OR	http://www.portlandmaps.com/google.cfm	
New York City, NY	http://spatialityblog.com/2010/07/08/mta-gis-data-update/ http://gis.nyc.gov/doitt/nycitymap/ http://mta.info/developers/download.html http://www.nyc.gov/html/dcp/html/bytes/dwnzdata.shtml http://www.nyc.gov/html/dcp/html/bytes/dwndistricts.shtml http://www.nyc.gov/html/dcp/html/bytes/applbyte.shtml	

Location	Website (map and/or data)	Objects
Albuquerque, NM	http://gis.cabq.gov/website/general/viewer.htm?ActiveLayer=49&Layers=0000000000000000000000000000011110000000100000001000000000000000000000001 http://www.cabq.gov/gis/download.html	Street signs, Bus stops, traffic lights, roads
Dakota County, MN	http://gisx.co.dakota.mn.us/website/dakotanetgis/	Trees, water, buildings, roads, bus stops
Spokane, WA	http://www.spokanegis.org/citymap2/	Hydrants, buildings, cell towers
Los Angles, CA	http://navigatela.lacity.org/index1.htm http://planning.lacounty.gov/gis/interactive http://egis3.lacounty.gov/dataportal/	Trees, benches, lakes, metro stations, roads
Kalamazoo, MI	http://www.kalamazoocity.org/onlinegis/CXviewer.htm	Roads, bus stops, lakes
Tallahassee-Leon County, FL	http://imsinter.leoncountyfl.gov/website/Base_SDE/viewer.htm	Hydrants, buildings, lakes
Boca-Raton, FL	http://www.ci.boca-raton.fl.us/muni/traffic/atms/signal.shtm http://bocagis.ci.boca-raton.fl.us/boca_traffic/index.html http://www.pbcgov.com/iss/itoperations/cwgis/GISdatasearch/	Traffic lights, sidewalks, bodies of water, buildings

PREVIOUS SCREENSHOTS





SCREENSHOT


CITY OF ALBUQUERQUE
www.cabq.gov
ALBUQUERQUE GIS DATA WEBSITE
LAYERS
STREETS
BASEMAP
INFRASTRUCTURE
TRANSIT/SUNTRAN
BOUNDARIES
SITES
ENVIRONMENT
APS
TRAFFIC ENG.
AIR PHOTO
2010 AIR PHOTO
Refresh Map
Auto Refresh
Help:
Closed group, click to open.
Open group, click to close.
Map layer.
Hidden group/layer, click for visible.
Visible group/layer, click to hide.
Layer not visible at this scale.
Partially visible group, click for visible.
Inactive layer, click for active.
The active layer.
STREET NETWORK is now the Active Layer

WHAT'S NEXT

- Test using the chosen data
- Decide if this project is feasible:
  - Train object detectors for 13 object list
  - Compare final results with/without fusing GIS data
- Customize trained object detectors using training web images