





500 x 386 - Aug 12, 2013 - Xin Tech Market Noxzema

Dove Green Cream Bar Soap 100g ... - Xin Tech Online...

500 x 386 - Aug 9, 2013 - Xin Tech Market Dove Green

Primegrip Multi Purpose Gloves ... - Xin Tech Online Store

500 × 386 - Oct 10, 2013 - Xin Tech Market Primegrip

ST\_Primegrip\_Multi\_Purpose\_Glove] - Primegrip Multi

Nov. 🚍 xintech bit/index.php?mein\_peper-product\_info\_id\_ \*

XZ\_Dove\_Green\_Cream\_Bar\_Soap\_100] - Dove Green

Original Deep Cleaning Cream 334ml [

Original Deep Cleaning ..

Cream Bar Scap 100g [

Cream Bar Scap 100g.

Multi Purpose Gloves [

Purpose Gloves 12PK.

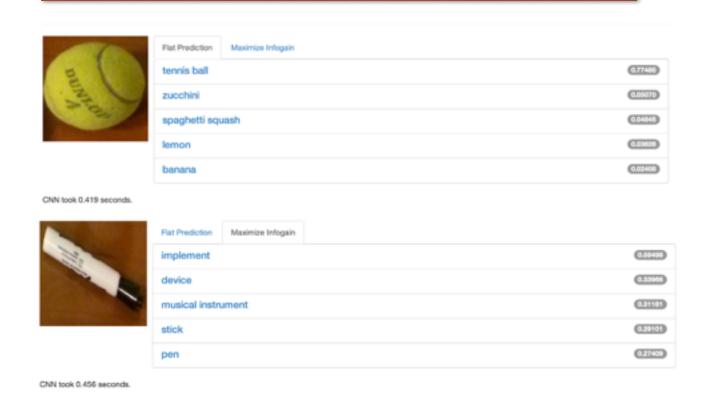
# Open-Vocabulary Object retrieval



S. Guadarrama<sup>1</sup>, E. Rodner<sup>2</sup>, K. Saenko<sup>3</sup>, N. Zhang<sup>1</sup>, R. Farrell<sup>4</sup>, J. Donahue<sup>1</sup>, T. Darrell<sup>1,5</sup>

## **Category Recognition**

### Brew with Caffe caffe.berkeleyvision.org



**Instance Matching** 

Heinz® Tomato Ketchup, America's Favorite Ketchup®, is

It's no wonder Heinz Tomato Ketchup is the world's favorite.

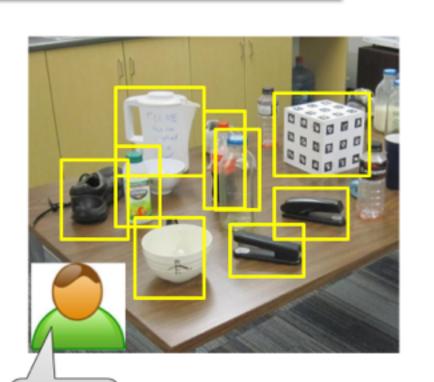
Only the firmest, juiciest, freshest tomatoes make it into our

bottle. Every tomato in every bottle of ...

Heinz - Ketchup

# **Open-Vocabulary Interface**

- the Odwalla juice
- the **kettle**
- black shoe
- the big bowl
- the black stapler
- the white box
- the coke bottle
- the empty bottle



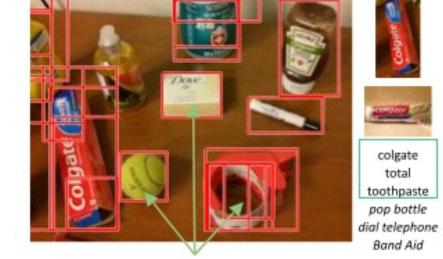
# **Combining Category & Instance**

Grab the

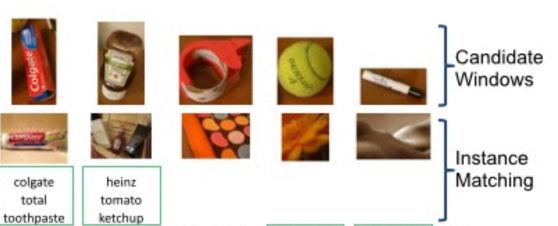
Odwalla

juice

#### Scene Image



Candidate Windows



coffee mug

espresso

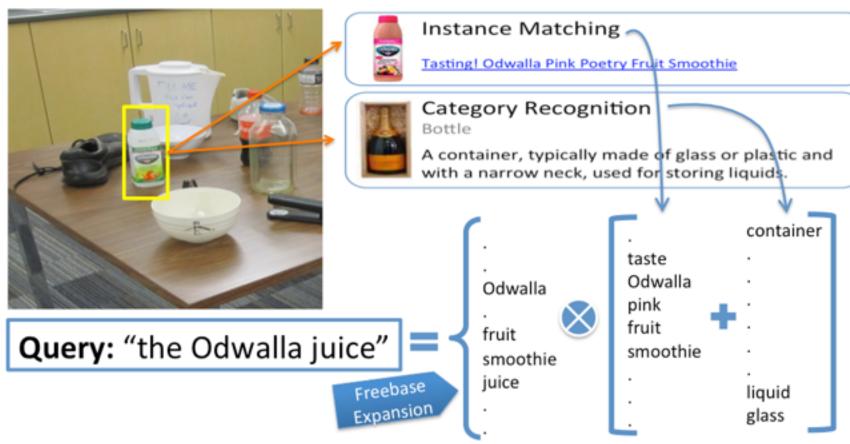
Band Aid squash watch

packet

clock

pop bottle

# Projecting into a Text Space



## Results on Household Objects



"Please, select the ...

a) — bottle which is lying down / pepper sauce bottle Combined please / tabasco / bottle of tabasco sauce / tabsco brand sauce / sauce here / tabasco pepper sauce / red Tabasco sauce / small glass bottle ":

b) — empty corn flakes box / white box of cereal / corn flakes / corn flakes pack / corn-flakes packet / kellogg's corn flakes ":

Baselines

Based

Method Kitchen ImageNet 43.43% MQ-Avg [5] 41.42% IQ-Engine (IQE) 24.46% Google-Image (GIS) 39.19% DECAF-1K (DEC) 53.13%DEC+FB (DEC+) 54.05% 57.50% 57.24% LLC-10K (LLC) LLC+FB (LLC+) 63.65% Linear-SVM (LSVM) 45.75% 58.90% Rank-SVM (RSVM) 56.40% 72.62%62.49%Max-Kernel (MAX) 49.51%61.11%68.49% IQE,GIS 56.37% 51.86%58.86% IQE,GIS,DEC 64.09%60.95%75.04% 80.13% IQE,GIS,DEC,CAF 66.45% 64.15%66.76% 81.50% IQE,GIS,DEC,CAF,LLC 65.10%81.93% Full Cascade (CAS) 67.07%66.20%

### Code and paper available at http://openvoc.berkeleyvision.org

tennis ball

zuccini

implement

stick

pen

Category

Matching