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me. writing software professionally since 1998.

Geocoder.ca / Location Intelligence Works

- 1 Coverage: USA & Canada.
- 2 Open Source Core Module can be easily extended for other countries
- 3 Since: 2005. Written in mod perl
- 4 Specs: Forward & Reverse Geocoding. XML, JSONp and Web.
- 5 Finding locations in text, returning standard location formatting and coordinates.
- 6 Used by 1000+ websites for geocoding functions.
- 7 Other uses: Location Intelligence & Analysis, Mapping, Geofencing, etc...

Location Entity Recognition / Main Challenges

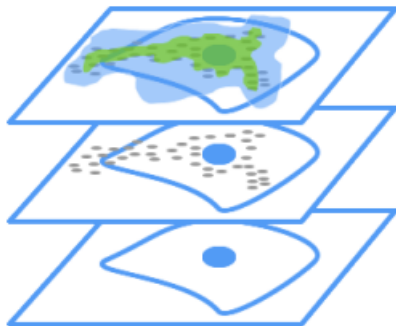


- 1 Ambiguities (a word could represent more than one entity)
- 2 Sliding Window Size (an entity could span several words)
- 3 Distinguishing Multiple entity types (location entities, categorization entities, etc)
- 4 Redundant entity recognition (an entity could be redundant. eg, "By Ward Market, in The Market, Ottawa")

Information is often associated with a place.



End Result: Layers of geocoded data.



The information we are actually interested in, is somewhere in there.

Information mining in Layers of geocoded data.

me I can tell you lots with little information.

it My software can tell you little with lots of information.



.. Because

me I often know what you are talking about.

you Do you know what I am talking about?

The What / Where techniques.

What?	Where?	find.
<input type="text" value="e.g. pizza, thai, steak"/>	<input type="text" value="Ottawa, Ontario"/>	

☹ 9 out of 10 location oriented services do this...

Search for (e.g. taco, cheap dinner, Max's)	Near (Address, City, State or Zip)	Search
<input type="text"/>	<input type="text" value="Ottawa, ON"/>	

⊗ but,.. There is a better way.

Proof of Concept

<http://foodpages.ca>, a restaurant information system stored as a geographically aware data structure using Geocoder.ca free xml port.

 Live Demo/w source code.

pho near somerset and bronson in ottawa



pho near [Somerset ST W](#) and [Bronson AVE](#) [ottawa ON](#) [ottawa ON](#)

Name	Address	Phone
Pho Bo Ga King	778 Somerset Street West	(613) 237-3002
Springroll House Cafe	1093 Wellington St. W.	(613) 728-3544
New Pho Bo Ga La	763 Somerset St.	(613) 233-2222
Pho Bo Ga	12A Lebreton St. North	(613) 234-7521
Pho Song Ha	778 Somerset St. West	(613) 237-8835
PHO LA FUSION	765 SOMERSET STREET	(613) 680-6108
PHO BO GA TRUC RESTAURANT	275 BANK ST	(613) 233-8717

Show more results

pho near somerset and bronson ottawa



pho near [Somerset ST W and Bronson AVE ottawa ON](#) ottawa ON

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pho bronson ottawa



pho bronson near [ottawa ON bronson AVE](#) ottawa ON

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Pho Bo Ga King	778 Somerset Street West	(613) 237-3002
New Pho Bo Ga La	763 Somerset St.	(613) 233-2222
Pho Bo Ga	12A Lebreton St. North	(613) 234-7521
Pho Song Ha	778 Somerset St. West	(613) 237-8835
The Greek Souvlaki Shack	258 Bank Street	(613) 695-1185
Bronson Pizza	368 Bronson Ave	(613) 238-3800
Gooney's Sandwich Works	360 Laurier Ave W	(613) 233-2460

Show more results

pho ottawa





pho OTTAWA ON

Name	Address	Phone
Pho Thi Noodle Soup Restaurant	1691-3 Merivale Ave	(613) 224-7687
Pho Moonlight	442 Hazeldean Rd	(613) 836-6658
Pho Bo Ga King	778 Somerset Street West	(613) 237-3002
Springroll House Cafe	1093 Wellington St. W.	(613) 728-3544
Pho Van Van	93 Holland Ave	(613) 722-1663
Hanoi-Pho	4312 Innes Rd. Unit 1	(613) 590-1000
Pho Bamboo Vietnamese Restaurant	1792 Bank Street	(613) 260-9889


[Show more results](#)


Why, when we can just use Google?

Google  


[Web](#) [Images](#) [Maps](#) [Shopping](#) [More ▾](#) [Search tools](#)

About 5,540 results (0.28 seconds)

[Pizza Pizza, 673 Somerset St W, Centretown Glebe OTTAWA, ON](#) 
pizzapizza-somerset.foodpages.ca/ ▾
Pizza Pizza, 673 **Somerset St W**, Centretown Glebe. ... Street View; Cross Street: at **Bronson**; More Restaurants near Pizza Pizza · **OTTAWA** Restaurants ...

[Saigon Boy Noodle House, 648 Somerset W, Centretown Glebe ...](#) 
saigon-boy-noodle-house.foodpages.ca/ ▾
Oct 27, 2012 – ... **Near** the main intersection of: **Somerset St W** and **Bronson Ave** ...
This Place the **Pho** was not bad, but the Wonton Egg »more; Well done saigon boy. ...
Ranked #1 of 20 Restaurants in Centretown Glebe **Ottawa**, rated 5.0 ...

[. Restaurant Guide nearby Pho Song Ha on 778 Somerset St. Wes...](#)
foodpages.ca/?find=Restaurants&near=146703 ▾
Distance, Restaurant name · Rating on a scale of [1 to 5]

[RAW SUGAR CAFE Quality Ranking #5](#)  Like 0
raw-sugar-cafe.foodpages.ca/?ranking=1 ▾

..or Bing?

WEB IMAGES VIDEOS MAPS NEWS SHOPPING MORE



site:foodpages.ca pho near somerset and bronson ottawa



12,500 RESULTS Narrow by language ▾ Narrow by region ▾

Showing results for **phone near somerset and bronson ottawa** too.
Do you want results only for [site:foodpages.ca pho near somerset and bronson ottawa](#)?

[Bronson Pizza, 368 Bronson Ave, Glebe Ottawa, ON](#)

[bronson.foodpages.ca](#) ▾

... the area around **Somerset St W and Bronson** ... **Maclaren ST and Bronson AVE**;
More Restaurants near **Bronson Pizza**; **Ottawa** ... **368 Bronson Ave, Ottawa, ON K1R 6J3 Phone: 613-238-3800**

[Pizza Pizza, 673 Somerset St W, Centretown Glebe OTTAWA, ON](#)

[pizzapizza-somerset.foodpages.ca](#) ▾

Cross Street: at **Bronson**; More Restaurants near **Pizza Pizza**; **OTTAWA** Restaurants ...
673 Somerset St W, OTTAWA, ON Phone: (613) 567-1451 UnVerified Pizza Place ...

[Pho Bo Ga, 843 Somerset St W, Glebe Ottawa, ON](#)

[phoboga.foodpages.ca](#) ▾

Cross Street: **Somerset ST W and Rochester ST**; More Restaurants near **Pho Bo Ga**;
Ottawa Restaurants ... **Pho Bo Ga 843 Somerset St W, Ottawa, ON K1R 6R6 Phone: 613-234-7089**

[Saigon Boy Noodle House, 648 Somerset W, Centretown Glebe Ottawa, ON](#)

[saigon-boy-noodle-house.foodpages.ca](#) ▾

... area around **Somerset St W and Bronson** ... of: **Somerset St W and Bronson Ave**;
More Restaurants near **Saigon Boy Noodle House**; **Ottawa** Restaurants ... **Somerset W**



.. Because

- ✘ They don't really know what I am talking about.
- 1 Location, Location, Location...
- 2 It is also more fun to create your own Google with a few lines of perl code running on your own laptop! (approx 40k lines of perl code)

Current State / GeoCoder.ca location entity engine

- 1 Input: any Canada or USA location.
- 2 Output: XML or JSONp (entities & latitude/longitude.)

Input: pho near somerset and bronson in ottawa

Output:

```
<geodata>
<latt>45.411521</latt>
<longt>-75.705759</longt>
<city>ottawa</city>
<prov>ON</prov>
<street1>Somerset ST W</street1>
<street2>Bronson AVE</street2>
</geodata>
```

Listing 1: XML

To Do

- 1 Other countries.
- 2 Better ambiguity resolution (when a word is both a location entity and a search item)
- 3 Spelling correction (recognize mis-spelled street, city names, etc)
Alternate names (eg, The GTA vs Toronto) works as of today.
- 4 Multiple location entity recognition.
- 5 Multiple Cities/Points Route planning using genetic algorithms (... work in progress, a quick example).

Source / Contact info

<http://geocoder.ca/onetimedownload/source/GC.pm>

eruci at geocoder.ca

Thanks

AMA