

# Geocoding for Beginners

November 18, 2013

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# Overview

- What is geocoding?
- Two tools:
  - BatchGeo
  - Geo for Google Docs
- No GIS software required!

Links and other tools at:

<http://guides.library.upenn.edu/geocodingoptions>

# What is geocoding?

Unlocking geographic information

1600 Pennsylvania Avenue Northwest, Washington, DC

1600 Pennsylvania Ave NW  
President's Park  
Washington, DC 20500

[Directions](#) [Save](#)



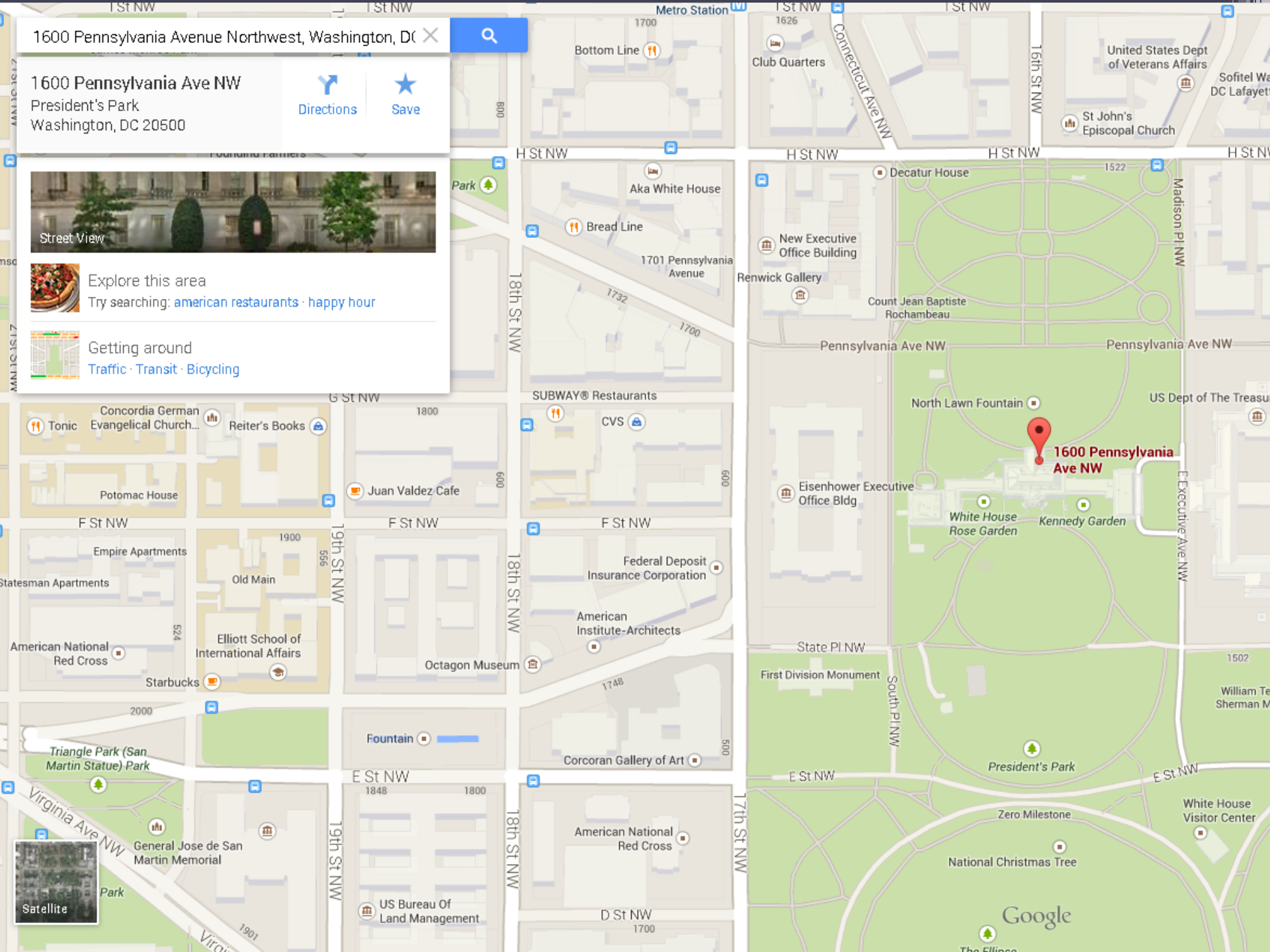
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Getting around

[Traffic](#) · [Transit](#) · [Bicycling](#)



1600 Pennsylvania Avenue Northwest, Washington, DC

1600 Pennsylvania Ave NW

President's Park  
Washington, DC 20500

[Directions](#)

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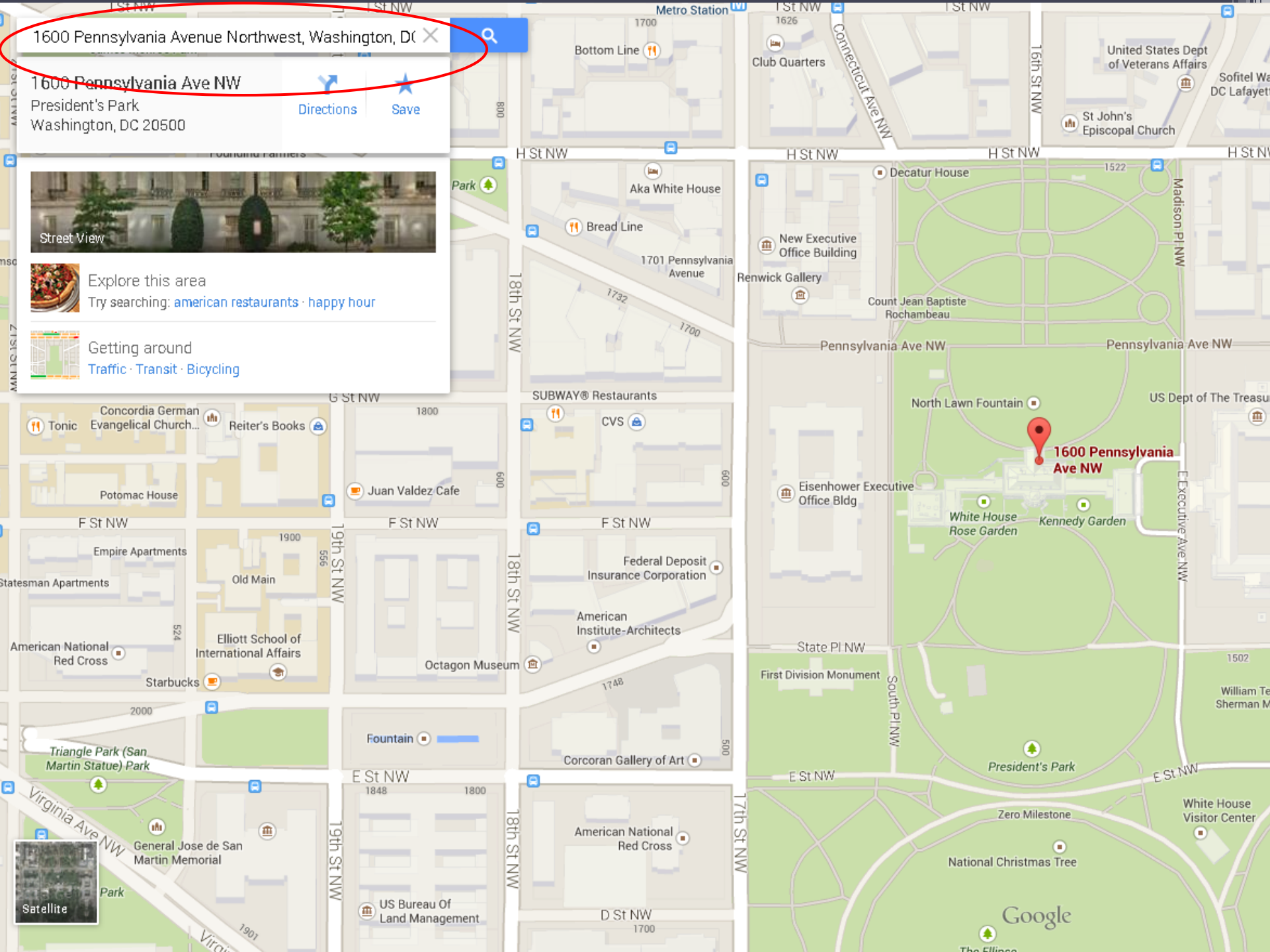
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1600 Pennsylvania Avenue Northwest, Washington, DC

1600 Pennsylvania Ave NW  
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Washington, DC 20500

[Directions](#) [Save](#)



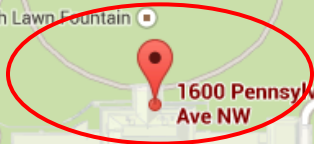
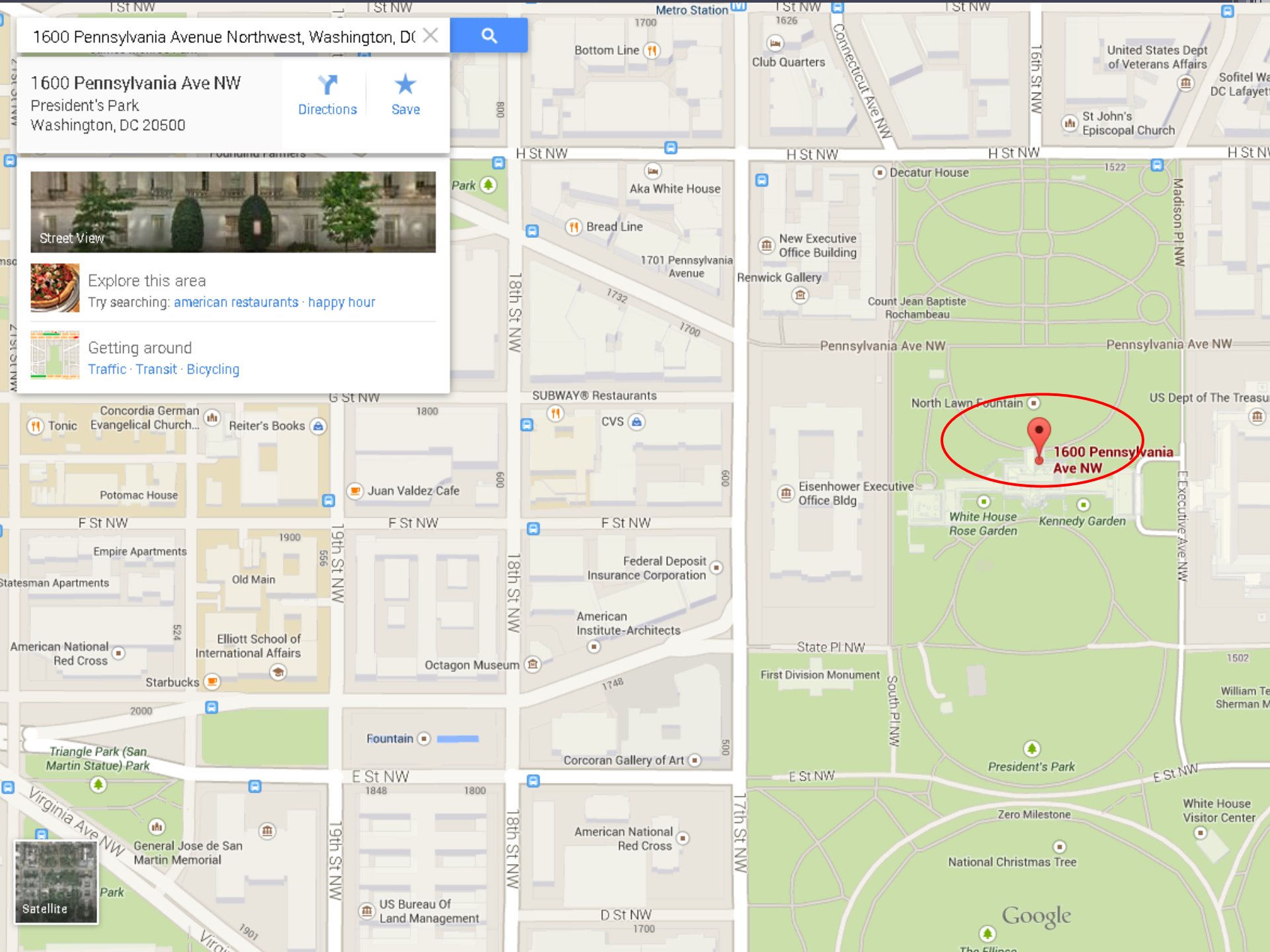
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Getting around

[Traffic](#) · [Transit](#) · [Bicycling](#)



1600 Pennsylvania Ave NW

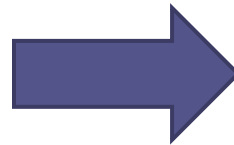
Google

# Definition of geocoding

“To assign a street address to a location.”

<http://support.esri.com/en/knowledgebase/Gisdictionary>

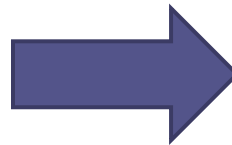
1600 Pennsylvania Ave NW,  
Washington, DC 20500,



(38.8977, -77.0365)

# Batch geocoding

Location Address [Public]	Location City [Public]	Location State [Public]	Location ZIP [Public]
805 SPRINGDALE DR	DOWNTOWN	PA	19335
900 AGNEW RD	PITTSBURGH	PA	15227
222 VALLEY CREEK BLVD	EXTON	PA	19341
3556 FRANKFORD AVE	PHILADELPHIA	PA	19134
995 OLD EAGLE SCHOOL	WAYNE	PA	19087
182139 CECIL B MOORE AVE	PHILADELPHIA	PA	19121
4101 NORTH AMERICAN AVE	PHILADELPHIA	PA	19140
118 MARKET ST	PHILADELPHIA	PA	19104





# How to Geocode

Using either of two tools—BatchGeo or Geo for Google Docs—  
and no GIS software

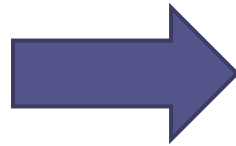
# Theoretically speaking...

1. Parse the input addresses into components
2. Compare the input with reference data
3. Assign coordinates to each input address to generate the output
4. Assess the results

# Theoretically speaking...

1. Parse the input addresses into components

1600 Pennsylvania Ave NW,  
Washington, DC 20500



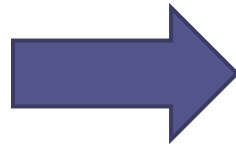
	A	B	C	D
1	StreetAddress	City	State	ZIP
2	1600 Pennsylvania Ave. NW	Washington	DC	20500

2. Compare the input with reference data
3. Assign coordinates to each input address to generate the output
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# Theoretically speaking...

1. Parse the input addresses into components

1600 Pennsylvania Ave NW,  
Washington, DC 20500



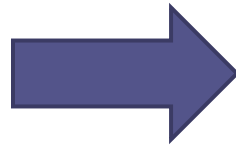
	A	B	C	D
1	StreetAddress	City	State	ZIP
2	1600 Pennsylvania Ave. NW	Washington	DC	20500

2. Compare the input with reference data  
*TIGER/Line®, Google Maps API, OpenStreetMap, etc.*
3. Assign coordinates to each input address to generate the output
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# Theoretically speaking...

1. Parse the input addresses into components

1600 Pennsylvania Ave NW,  
Washington, DC 20500



	A	B	C	D
1	StreetAddress	City	State	ZIP
2	1600 Pennsylvania Ave. NW	Washington	DC	20500

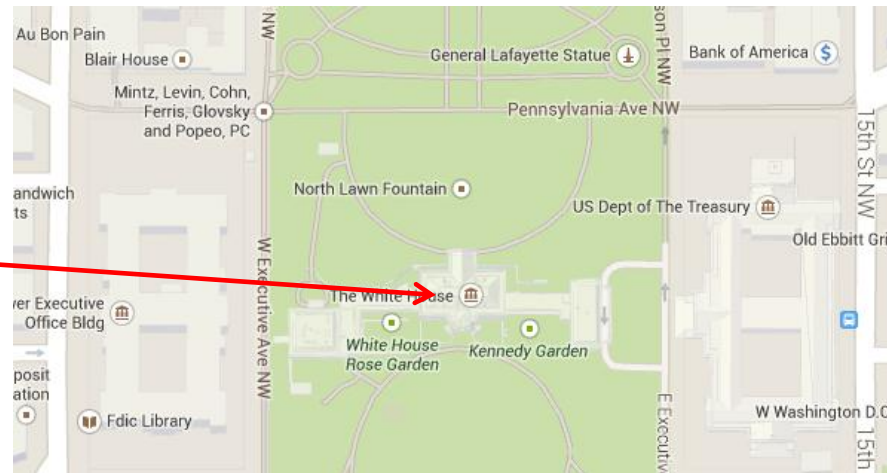
2. Compare the input with reference data  
*TIGER/Line®, Google Maps API, OpenStreetMap, etc.*
3. Assign coordinates to each input address to generate the output
4. Assess the results  
*Geocoding is not infallible!*

# Behind the scenes

- Rooftop geocoding
- Street geocoding

# Rooftop geocoding (Point matching)

	A	B	C	D
1	StreetAddress	City	State	ZIP
2	1600 Pennsylvania Ave. NW	Washington	DC	20500



1600 Pennsylvania Ave  
Latitude: 38.8977  
Longitude: -77.0365

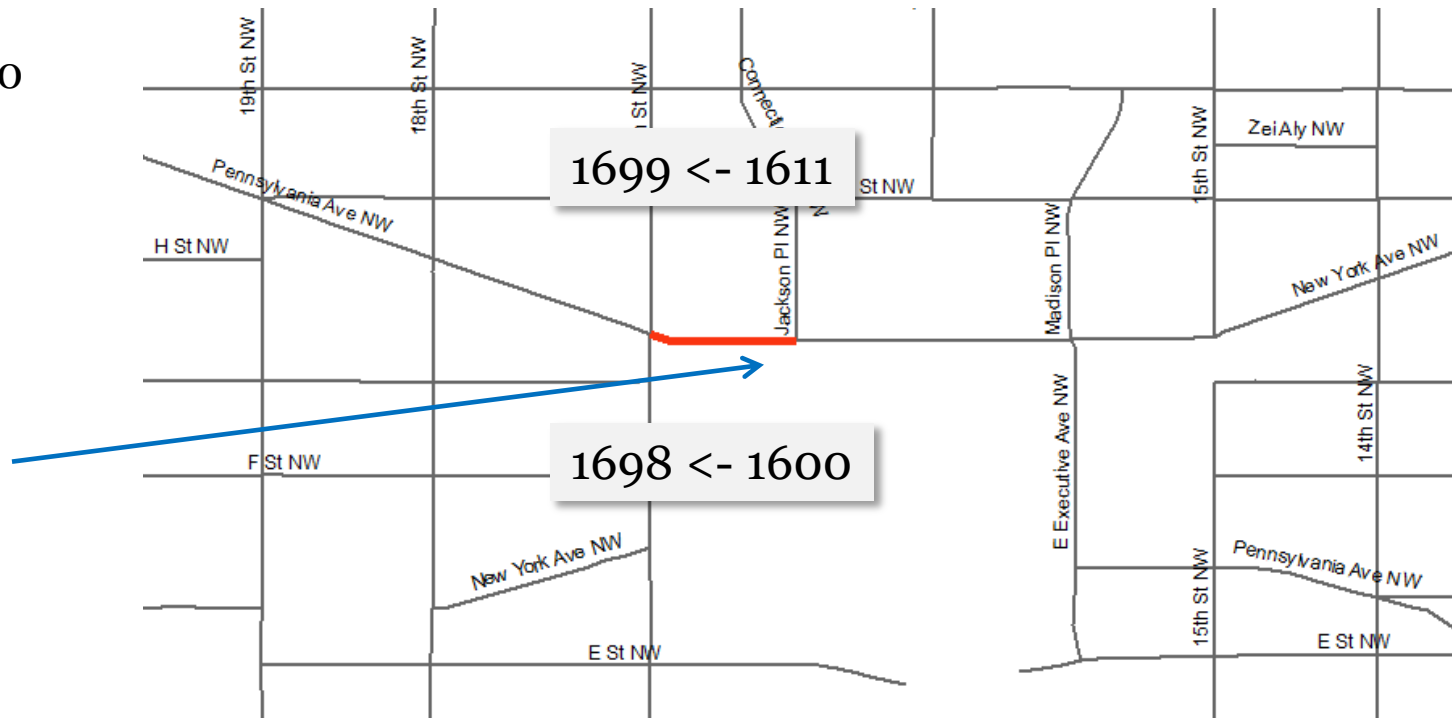


	A	B	C	D	E	F
1	StreetAddress	City	State	ZIP	Latitude	Longitude
2	1600 Pennsylvania Ave. NW	Washington	DC	20500	38.8977	-77.0365

# Street geocoding (Address interpolation)

House numbers range from 1600 to 1698 on the south side, and 1611 to 1699 on the north side

Therefore, 1600 Pennsylvania is right about here



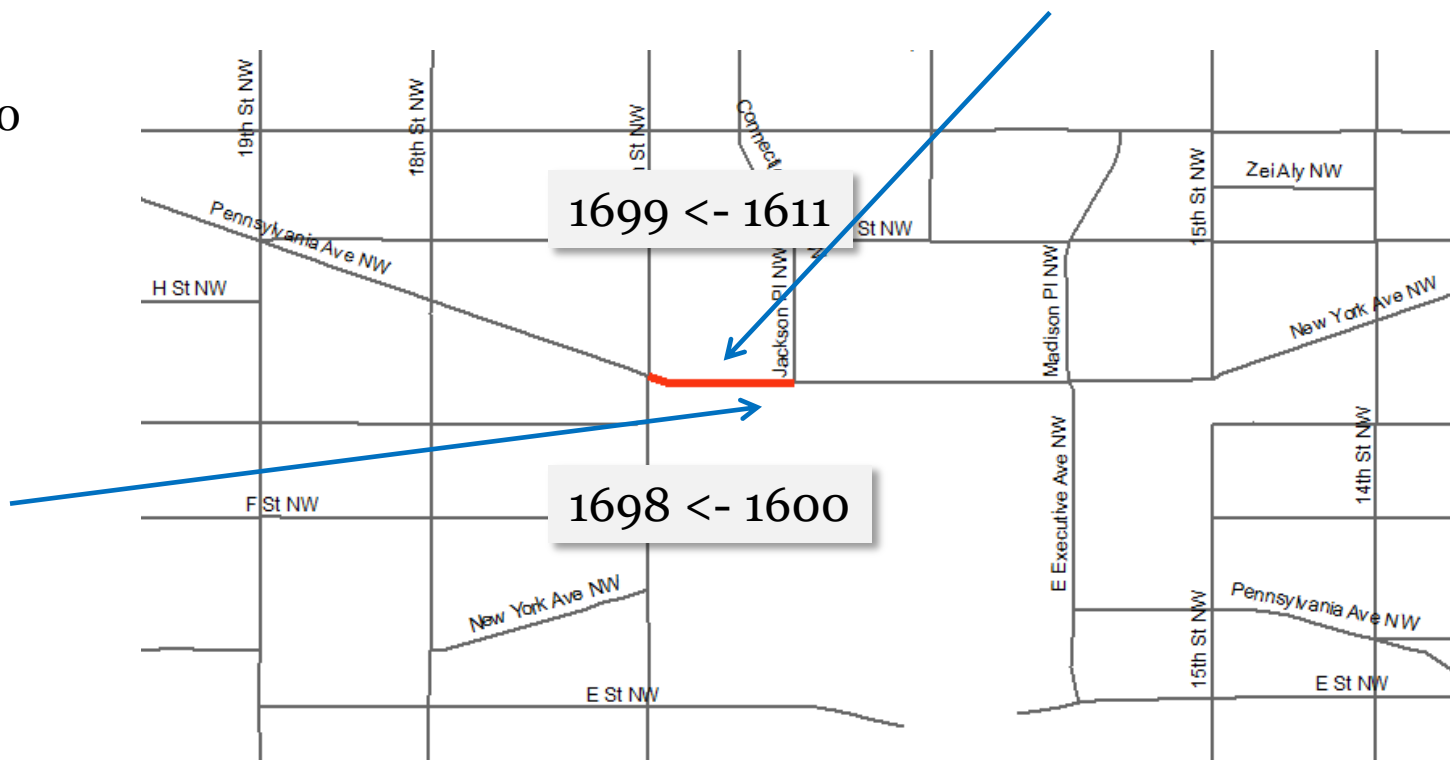


# Street geocoding (Address interpolation)

And 1651 Pennsylvania would be in the middle on the north side, around here

House numbers range from 1600 to 1698 on the south side, and 1611 to 1699 on the north side

Therefore, 1600 Pennsylvania is right about here



# Comparison of tools

## BatchGeo

- Web-based
- Uses Google Maps API as reference data
- 250 feature limit
- Outputs include embeddable map or KML

## Geo for Google Docs

- Web-based, via Google Drive
- Uses your choice of MapQuest Nominatim or Yahoo Placefinder APIs
- No limits
- Output as latitude and longitude spreadsheet columns, or GeoJSON

# The Data: Elementary and Secondary Information System

	A	B	C	D	E	F	G	H	I	J	K
1	ELSI Export										
2											
3	National Center for Education Statistics - <a href="http://nces.ed.gov/ccd/elsi/">http://nces.ed.gov/ccd/elsi/</a>										
4											
5	This is a Public School based table with the following filters applied: State(s) (All Years): Pennsylvania; Charter School [Public School] (All Years: 2010-11): Yes										
6											
7	School Name	State Name [Public	School Name [Public S	County Num	Location Address [Publi	Location City [Publ	Loca	Location Z	Location Z	Charter Sc	School Level
8	21ST CENTURY CYBER	Pennsylvania	21ST CENTURY CYBER C	42029	805 SPRINGDALE DR	DOWNINGTOWN	PA	19335	3043	1-Yes	4-Other
9	ACADEMY CS	Pennsylvania	ACADEMY CS	42003	900 AGNEW RD	PITTSBURGH	PA	15227 †		1-Yes	3-High
10	ACHIEVEMENT HOUSE	Pennsylvania	ACHIEVEMENT HOUSE	42029	222 VALLEY CREEK BLVD	EXTON	PA	19341	2635	1-Yes	3-High
11	AD PRIMA CS	Pennsylvania	AD PRIMA CS	42101	3556 FRANKFORD AVE	PHILADELPHIA	PA	19134 †		1-Yes	1-Primary
12	AGORA CYBER CS	Pennsylvania	AGORA CYBER CS	42029	995 OLD EAGLE SCHOOL	WAYNE	PA	19087 †		1-Yes	4-Other
13	ALLIANCE FOR PROGR	Pennsylvania	ALLIANCE FOR PROGRE	42101	182139 CECIL B MOORE A	PHILADELPHIA	PA	19121 †		1-Yes	1-Primary
14	ANTONIA PANTOJA C	Pennsylvania	ANTONIA PANTOJA CC	42101	4101 NORTH AMERICAN	PHILADELPHIA	PA	19140 †		1-Yes	1-Primary
15	ARISE ACADEMY CHAF	Pennsylvania	ARISE ACADEMY CHAR	42101	118 MARKET ST	PHILADELPHIA	PA	19104 †		1-Yes	4-Other
16	ASPIRA BILINGUAL CY	Pennsylvania	ASPIRA BILINGUAL CYB	42101	4322 NORTH 5TH ST	PHILADELPHIA	PA	19140	4916	1-Yes	4-Other
17	AVON GROVE CS	Pennsylvania	AVON GROVE CS	42029	110 EAST STATE ST	WEST GROVE	PA	19390 †		1-Yes	4-Other
18	BEAR CREEK COMMUN	Pennsylvania	BEAR CREEK COMMUNI	42079	2000 BEAR CREEK BLVD	WILKES-BARRE	PA	18702 †		1-Yes	1-Primary
19	BEAVER AREA ACADEN	Pennsylvania	BEAVER AREA ACADEN	42007	GYPSEY GLEN RD	BEAVER	PA	15009 †		1-Yes	3-High
20	BELMONT ACADEMY C	Pennsylvania	BELMONT ACADEMY CH	42101	907 NORTH 41ST ST	PHILADELPHIA	PA	19103 †		1-Yes	1-Primary
21	BELMONT CHARTER SC	Pennsylvania	BELMONT CHARTER SCI	42101	4030 BROWN ST	PHILADELPHIA	PA	19104 †		1-Yes	1-Primary
22	BOYS LATIN OF PHILAD	Pennsylvania	BOYS LATIN OF PHILAD	42101	5501 CEDAR AVE	PHILADELPHIA	PA	19143 †		1-Yes	3-High
23	BUCKS COUNTY MONT	Pennsylvania	BUCKS COUNTY MONTE	42017	219 TYBURN RD	FAIRLESS HILLS	PA	19030 †		1-Yes	1-Primary
24	CAREER CONNECTION	Pennsylvania	CAREER CONNECTIONS	42003	4412 BUTLER ST	PITTSBURGH	PA	15201 †		1-Yes	3-High
25	CENTER FOR STUDENT	Pennsylvania	CENTER FOR STUDENT I	42017	345 LAKESIDE DR	LEVITTOWN	PA	19054 †		1-Yes	4-Other
26	CENTRAL PA DIGITAL L	Pennsylvania	CENTRAL PA DIGITAL LF	42013	1500 4TH AVE	ALTOONA	PA	16602 †		1-Yes	4-Other
27	CENTRE LEARNING CO	Pennsylvania	CENTRE LEARNING COM	42027	2643 WEST COLLEGE AVE	STATE COLLEGE	PA	16801 †		1-Yes	2-Middle
28	CHARTER HIGH SCHOC	Pennsylvania	CHARTER HIGH SCHOOL	42101	105 SOUTH 7TH ST	PHILADELPHIA	PA	19106	3324	1-Yes	3-High
29	CHESTER CO FAMILY A	Pennsylvania	CHESTER CO FAMILY AC	42029	323 EAST GAY ST	WEST CHESTER	PA	19380 †		1-Yes	1-Primary
30	CHESTER COMMUNITY	Pennsylvania	CHESTER COMMUNITY	42045	302 EAST 5TH ST	CHESTER	PA	19013 †		1-Yes	1-Primary

# BatchGeo

<http://batchgeo.com/>



make maps

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pro pricing

mobile

support

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## Copy and then paste your location data below:

Example Address	City	State	Zip	Name	Phone Number	Group	UI
1 Crossgates Mall Road	Albany	NY	12203	Apple Store Cross Gates	(518) 869-3192	Example Group 1	ht
Duke Rd & Walden Ave	Buffalo	NY	14225	Apple Store Walden Galleria	(716) 685-2762	Example Group 2	ht
630 Old Country Rd.	Garden City	NY	11530	Apple Store Roosevelt Field	(516) 248-3347	Example Group 3	ht
160 Walt Whitman Rd	Huntington Station	NY	11746	Apple Store Walt Whitman	(631) 425-1563	Example Group 3	ht

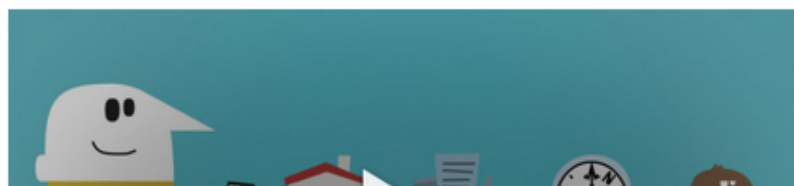
Feedback

( Don't forget to include some header columns - You can also try our [Spreadsheet Template](#), or hit "Map Now" and try it out with our example data. )

Validate &amp; Set Options

or

Map Now



### Mobile Maps

We have native and cross platform apps for many GPS enabled mobile





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Example Address	City	State	Zip	Name	Phone Number	Group	UI
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Duke Rd & Walden Ave	Buffalo	NY	14205	Apple Store Walden Galleria	(716) 685-2762	Example Group 2	ht
630 Old Country Rd.	Garden City	NY	11530	Apple Store Roosevelt Field	(516) 248-3347	Example Group 3	ht
160 Walt Whitman Rd.	Huntington Station	NY	11746	Apple Store Walt Whitman	(631) 425-1563	Example Group 3	ht

**click to copy/paste**

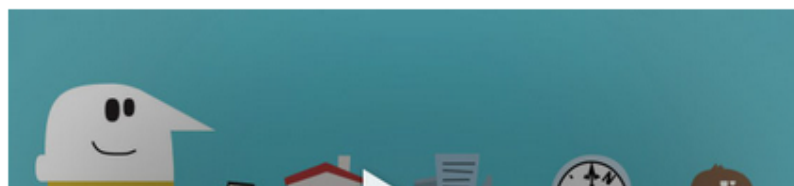
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Validate &amp; Set Options

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Map Now



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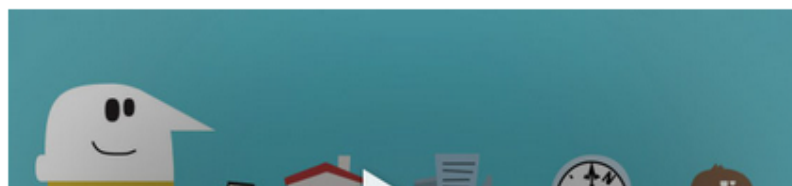
```

WIDENER PARTNERSHIP CS Pennsylvania WIDENER PARTNERSHIP CS 42045 1450 EDGEMONT AVE CHESTER PA 190
WISSAHICKON CS Pennsylvania WISSAHICKON CS 42101 4700 G WISSAHICKON AVE PHILADELPHIA PA 19144 +
WONDERLAND CS Pennsylvania WONDERLAND CS 42027 2112 SANDY DR STATE COLLEGE PA 16803 2282 1-3
WORLD COMMUNICATIONS CS Pennsylvania WORLD COMMUNICATIONS CS 42101 51220 SOUTH BROAD ST PHILADELPHIA PA
YOUNG SCHOLARS CS Pennsylvania YOUNG SCHOLARS CS 42101 900 NORTH MARSHALL ST PHILADELPHIA PA
YOUNG SCHOLARS FREDERICK DOUGLASS CHARTER SCHOOL Pennsylvania YOUNG SCHOLARS FREDERICK DOUGLASS CHARTER S
YOUNG SCHOLARS OF CENTRAL PA CS Pennsylvania YOUNG SCHOLARS OF CENTRAL PA CS 42027 1530 WESTERLY PARKWAY ST
YOUTH BUILD PHILA CS Pennsylvania YOUTH BUILD PHILA CS 42101 1231 NORTH BROAD ST 3RD FLOOR PHILADELPH
  
```

( Don't forget to include some header columns - You can also try our [Spreadsheet Template](#), or hit "Map Now" and try it out with our example data. )

or

Feedback



### Mobile Maps

We have native and cross platform apps for many GPS enabled mobile



## Validate & Set Options

We have made our best guess at your data, but check below that everything is ok.

Region

Location / Address

City / County

State / Province / Postcode

Zip / Postcode / Country

### 21ST CENTURY CYBER CS

805 SPRINGDALE DR  
DOWNTOWN, Pennsylvania 19335

[School Name \[Public School\] 2010-11: 21ST CENTURY  
CYBER CS](#)

[County Number \[Public School\] 2010-11: 42029](#)

[Location State Abbr \[Public School\] 2010-11: PA](#)

[Location ZIP4 \[Public School\] 2010-11: 3043](#)

[Charter School \[Public School\] 2010-11: 1-Yes](#)

[School Level Code \[Public School\] 2010-11: 4-Other](#)

Group By / Thematic Value

Show Advanced Options

Make Map



Geocoded 144 records.

See your map below. If you find any markers out of place - just drag and drop them to the correct location.

Note: 1 locations were not found.



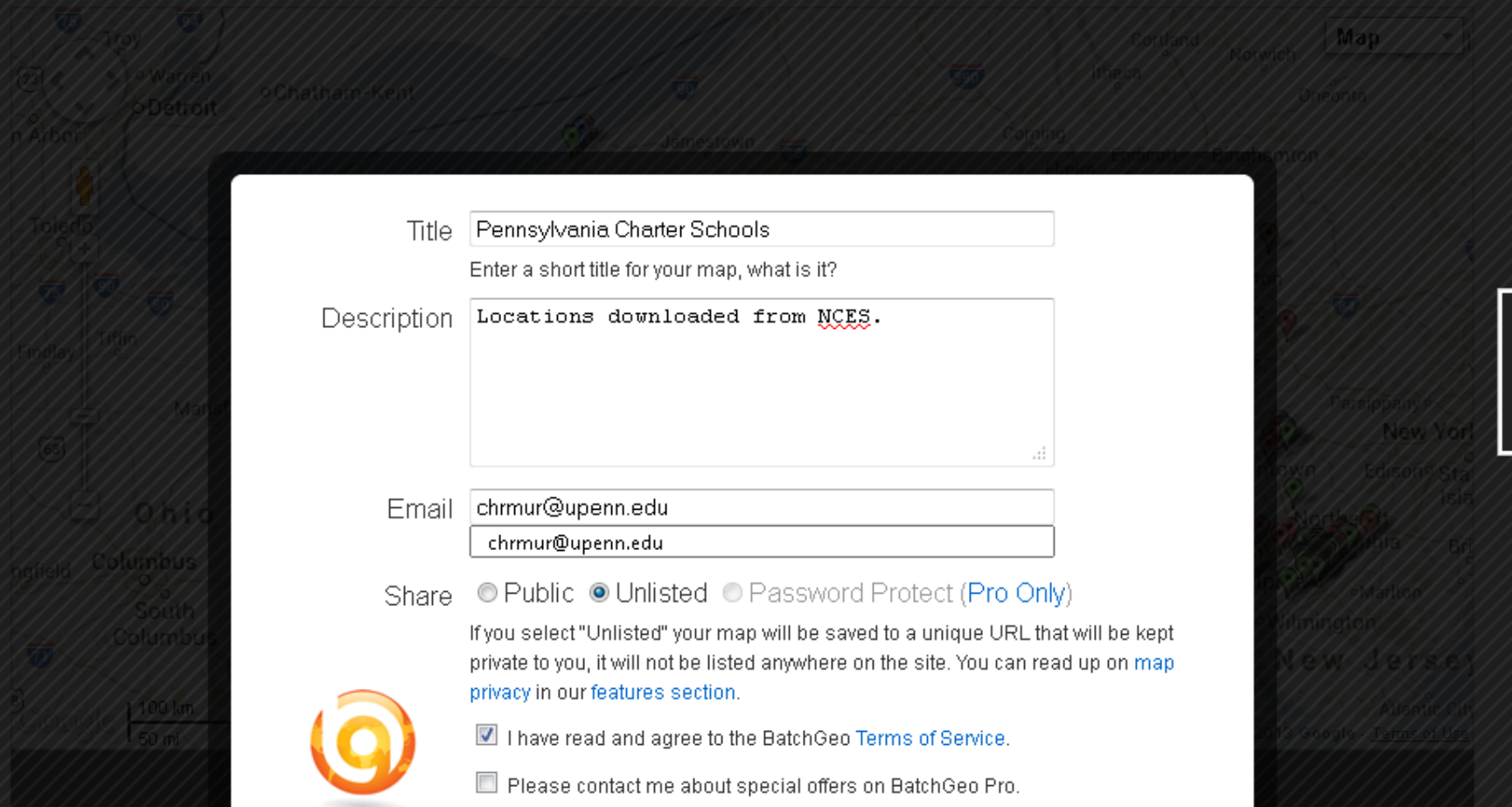
School Level Code [Public School] 2010-11 4-Other 3-High 1-Primary 2-Middle

Feedback

Save & Continue

See your map below. If you find any markers out of place - just drag and drop them to the correct location.

Note: 1 locations were not found.



Title

Enter a short title for your map, what is it?

Description

Email

Share  Public  Unlisted  Password Protect ([Pro Only](#))

If you select "Unlisted" your map will be saved to a unique URL that will be kept private to you, it will not be listed anywhere on the site. You can read up on [map privacy](#) in our [features section](#).



- I have read and agree to the BatchGeo [Terms of Service](#).
- Please contact me about special offers on BatchGeo Pro.

[Save Map](#)

Feedback



Pennsylvania Charter Schools

Search



Map



Google 100 km 50 mi

Map data ©2013 Google - Terms of Use

School Level Code [Public School] 2010-11
📍 4-Other
 📍 3-High
 📍 1-Primary
 📍 2-Middle

Locations downloaded from NCES.

Location State Abbr [Public School] 2010-11: PA  
Location ZIP4 [Public School] 2010-11: †  
Charter School [Public School] 2010-11: 1-Yes  
School Level Code [Public School] 2010-11: 2-Middle

---

**YOUNG SCHOLARS FREDERICK DOUGLASS CHARTER SCHOOL**

2118 WEST NORRIS ST

PHILADELPHIA, Pennsylvania 19121

School Name [Public School] 2010-11: YOUNG SCHOLARS FREDERICK DOUGLASS CHARTER SCHOOL

County Number [Public School] 2010-11: 42101

Location State Abbr [Public School] 2010-11: PA

Location ZIP4 [Public School] 2010-11: 2100

Charter School [Public School] 2010-11: 1-Yes

School Level Code [Public School] 2010-11: 1-Primary

**YOUNG SCHOLARS OF CENTRAL PA CS**

1530 WESTERLY PARKWAY

STATE COLLEGE, Pennsylvania 16801

School Name [Public School] 2010-11: YOUNG SCHOLARS OF CENTRAL PA CS

County Number [Public School] 2010-11: 42027

Location State Abbr [Public School] 2010-11: PA

Location ZIP4 [Public School] 2010-11: †

Charter School [Public School] 2010-11: 1-Yes

School Level Code [Public School] 2010-11: 1-Primary

**YOUTH BUILD PHILA CS**

1231 NORTH BROAD ST 3RD FLOOR

PHILADELPHIA, Pennsylvania 19122

School Name [Public School] 2010-11: YOUTH BUILD PHILA CS

County Number [Public School] 2010-11: 42101

Location State Abbr [Public School] 2010-11: PA

Location ZIP4 [Public School] 2010-11: 4021

Charter School [Public School] 2010-11: 1-Yes

School Level Code [Public School] 2010-11: 3-High

[Download Pennsylvania Charter Schools Google Earth \(KML\)](#)

Location State Abbr [Public School] 2010-11: PA  
Location ZIP4 [Public School] 2010-11: †  
Charter School [Public School] 2010-11: 1-Yes  
School Level Code [Public School] 2010-11: 2-Middle

---

**YOUNG SCHOLARS FREDERICK DOUGLASS CHARTER SCHOOL**

2118 WEST NORRIS ST

PHILADELPHIA, Pennsylvania 19121

School Name [Public School] 2010-11: YOUNG SCHOLARS FREDERICK DOUGLASS CHARTER SCHOOL  
County Number [Public School] 2010-11: 42101  
Location State Abbr [Public School] 2010-11: PA  
Location ZIP4 [Public School] 2010-11: 2100  
Charter School [Public School] 2010-11: 1-Yes  
School Level Code [Public School] 2010-11: 1-Primary

---

**YOUNG SCHOLARS OF CENTRAL PA CS**

1530 WESTERLY PARKWAY

STATE COLLEGE, Pennsylvania 16801

School Name [Public School] 2010-11: YOUNG SCHOLARS OF CENTRAL PA CS  
County Number [Public School] 2010-11: 42027  
Location State Abbr [Public School] 2010-11: PA  
Location ZIP4 [Public School] 2010-11: †  
Charter School [Public School] 2010-11: 1-Yes  
School Level Code [Public School] 2010-11: 1-Primary

---

**YOUTH BUILD PHILA CS**

1231 NORTH BROAD ST 3RD FLOOR

PHILADELPHIA, Pennsylvania 19122

School Name [Public School] 2010-11: YOUTH BUILD PHILA CS  
County Number [Public School] 2010-11: 42101  
Location State Abbr [Public School] 2010-11: PA  
Location ZIP4 [Public School] 2010-11: 4021  
Charter School [Public School] 2010-11: 1-Yes  
School Level Code [Public School] 2010-11: 3-High

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[Download Pennsylvania Charter Schools Google Earth \(KML\)](#)

# Geo for Google Docs

<https://github.com/mapbox/geo-googledocs>

## charterschools\_pa

Christine Murray

File Edit View Insert Format Data Tools Help All changes saved in Drive

Comments

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	A	B	C	D	E	F	G	H	I	J	K
1	School Name	State Name [Public School] Latest available year	School Name [Public School] 2010-11	County Number [Public School] 2010-11	Location Address [Public School] 2010-11	Location City [Public School] 2010-11	Location State Abbr [Public School] 2010-11	Location ZIP [Public School] 2010-11	Location ZIP4 [Public School] 2010-11	Charter School [Public School] 2010-11	School Level Code [Public School] 2010-11
2	21ST CENTURY CYBER CS	Pennsylvania	21ST CENTURY CYBER CS	42029	805 SPRINGDALE DR	DOWNING	PA	19335	3043	1-Yes	4-Other
3	ACADEMY CS	Pennsylvania	ACADEMY CS	42003	900 AGNEW RD	PITTSBUR	PA	15227	†	1-Yes	3-High
4	ACHIEVEMENT HOUSE CS	Pennsylvania	ACHIEVEMENT HOUSE CS	42029	222 VALLEY CREEK BLVD	EXTON	PA	19341	2635	1-Yes	3-High
5	AD PRIMA CS	Pennsylvania	AD PRIMA CS	42101	3556 FRANKFORD AVE	PHILADEL	PA	19134	†	1-Yes	1-Primary
6	AGORA CYBER CS	Pennsylvania	AGORA CYBER CS	42029	995 OLD EAGLE SCHOOL RD	WAYNE	PA	19087	†	1-Yes	4-Other
7	ALLIANCE FOR PROGRESS CS	Pennsylvania	ALLIANCE FOR PROGRESS CS	42101	182139 CECIL B MOORE AVE	PHILADEL	PA	19121	†	1-Yes	1-Primary
8	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	Pennsylvania	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	42101	4101 NORTH AMERICAN ST	PHILADEL	PA	19140	†	1-Yes	1-Primary
	ARISE		ARISE ACADEMY								

	A	B	C	D	E	F	G	H	I	J	K
1	School Name	State Name [Public School] Latest available year	School Name [Public School] 2010-11	County Number [Public School] 2010-11	Location Address [Public School] 2010-11	Location City [Public School] 2010-11	Location State Abbr [Public School] 2010-11	Location ZIP [Public School] 2010-11	Location ZIP4 [Public School] 2010-11	Charter School [Public School] 2010-11	School Level Code [Public School] 2010-11
2	21ST CENTURY CYBER CS	Pennsylvania	21ST CENTURY CYBER CS	42029	805 SPRINGDALE RD	DOMINICA	PA	19225	2012	1-Yes	4-Other
3	ACADEMY CS										
4	ACHIEVEMENT HOUSE CS										
5	AD PRIMA CS	Pennsylvania	CS	42101	AVE	PHILADEL	PA	19134	†	1-Yes	1-Primary
6	AGORA CYBER CS	Pennsylvania	AGORA CYBER CS	42029	995 OLD EAGLE SCHOOL RD	WAYNE	PA	19087	†	1-Yes	4-Other
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	ARISE		ARISE ACADEMY								

1. Go to [drive.google.com](https://drive.google.com) and log on with Google credentials.
2. Click on the Upload button, then Files...
3. Select an Excel or CSV file from your computer.



GitHub

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mapbox / geo-googledocs

★ Star 83

Fork 29

Tools to integrate MapBox with Google Docs <http://mapbox.com/blog/mapping-google-doc-spreadsheet/>

38 commits

1 branch

0 releases

3 contributors



branch: master ▾

geo-googledocs /

Merge pull request #24 from jerheff/master ...



tmcw authored 4 months ago

latest commit 8097412a01



MapBox.js

Fix spacing

4 months ago



README.md

Add Cicero API link

4 months ago

README.md

# Geo for Google Docs

[Read the blog post & instructions for using this system.](#)

Code

Issues 13

Pull Requests 0

Wiki

Pulse

Graphs

Network

HTTPS clone URL

<https://github.com>


 You can clone with [HTTPS](#), or [Subversion](#).

Clone in Desktop

Download ZIP

# Geo for Google Docs Installation

- Copy the [source of mapbox.js](#)
- Open your Google spreadsheet and go to Tools > Script Editor
- Replace the content in the text box with the copied source from mapbox.js
- Set the name of this script to geo
- Go to File > Save and close the popup window
- Refresh your spreadsheet and you will see a new menu called Geo added after Help on the menu bar

GitHub

This repository ▾

Search or type a command



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mapbox / geo-googledocs

★ Star 83

Fork 24

Tools to integrate MapBox with Google Docs <http://mapbox.com/blog/mapping-google-doc-spreadsheet/>

38 commits

1 branch

0 releases

3 contributors



branch: master ▾

geo-googledocs / +

Merge pull request #24 from jerheff/master



tmcw authored 4 months ago

latest commit 8097412a01

MapBox.js

Fix spacing

4 months ago

README.md

Add Cicero API link

4 months ago

README.md

# Geo for Google Docs

[Read the blog post & instructions for using this system.](#)

Code

Issues 13

Pull Requests 0

Wiki

Pulse

Graphs

Network

HTTPS clone URL

<https://github.com>

You can clone with HTTPS, or Subversion.

Clone in Desktop

Download ZIP

```
// Global variables
```

```
var ss = SpreadsheetApp.getActiveSpreadsheet(),
    sheet = ss.getActiveSheet(),
    activeRange = ss.getActiveRange(),
    settings = {};
```

```
var geocoders = {
```

```
  yahoo: {
```

```
    query: function(query, key) {
      return 'http://where.yahooapis.com/geocode?appid=' +
        key + '&flags=JC&q=' + query;
    },
```

```
    parse: function(r) {
```

```
      try {
```

```
        return {
```

```
          longitude: r.ResultSet.Results[0].longitude,
          latitude: r.ResultSet.Results[0].latitude,
          accuracy: r.ResultSet.Results[0].quality
        }
```

```
      } catch(e) {
```

```
        return { longitude: '', latitude: '', accuracy: '' };
      }
    }
  },
```

```
  mapquest: {
```

```
    query: function(query, key) {
      return 'http://open.mapquestapi.com/nominatim/v1/search?format=json&limit=1&q=' + query;
    },
```

```
    parse: function(r) {
```

```
      try {
```

```
        return {
```

```
          longitude: r[0].lon,
          latitude: r[0].lat,
          accuracy: r[0].type
        }
```

```
      } catch(e) {
```

```
        return { longitude: '', latitude: '', accuracy: '' };
      }
    }
  },
```

```
  cicero: {
```

```
// Global variables
var ss = SpreadsheetApp.getActiveSpreadsheet(),
    sheet = ss.getActiveSheet(),
    activeRange = ss.getActiveRange(),
    settings = {};

var geocoders = {
  yahoo: {
    query: function(query, key) {
      return 'http://where.yahooapis.com/geocode?appid=' +
        key + '&flags=JC&q=' + query;
    },
    parse: function(r) {
      try {
        return {
          longitude: r.ResultSet.Results[0].longitude,
          latitude: r.ResultSet.Results[0].latitude,
          accuracy: r.ResultSet.Results[0].quality
        }
      } catch(e) {
        return { longitude: '', latitude: '', accuracy: '' };
      }
    }
  },
  mapquest: {
    query: function(query, key) {
      return 'http://open.mapquestapi.com/nominatim/v1/search?format=json&limit=1&q=' + query;
    },
    parse: function(r) {
      try {
        return {
          longitude: r[0].lon,
          latitude: r[0].lat,
          accuracy: r[0].type
        }
      } catch(e) {
        return { longitude: '', latitude: '', accuracy: '' };
      }
    }
  },
  cicero: {
```

Select all and copy.



Create a form

Script gallery...

Script manager...

Script editor...

Spelling...

Solver...

 Enable autocomplete

Notification rules...

Protect sheet...



A

B

C

H

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K

1

School Name

 State Name  
 [Public School]  
 Latest available year

 School Name  
 [Public School]  
 2010-11

 Co  
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 20

 Location  
 ZIP  
 [Public School]  
 2010-11

 Location  
 ZIP4  
 [Public School]  
 2010-11

 Charter  
 School  
 [Public School]  
 2010-11

 School  
 Level  
 Code  
 [Public School]  
 2010-11

2

21ST CENTURY  
CYBER CS

Pennsylvania

 21ST  
 CENTURY  
 CYBER CS  
 ACADEMY

CS

19335

3043

1-Yes

4-Other

3

ACADEMY CS

Pennsylvania

ACADEMY CS

CS

15227 †

1-Yes

3-High

4

ACHIEVEMENT  
HOUSE CS

Pennsylvania

ACHIEVEMENT  
HOUSE CS

CS

19341

2635

1-Yes

3-High

5

AD PRIMA CS

Pennsylvania

AD PRIMA  
CS

CS

42101

FRANKFORD  
AVE

PHILADEL PA

19134 †

1-Yes

1-Primary

6

AGORA CYBER  
CS

Pennsylvania

AGORA  
CYBER CS

CS

42029

995 OLD EAGLE  
SCHOOL RD

WAYNE PA

19087 †

1-Yes

4-Other

7

ALLIANCE FOR  
PROGRESS CS

Pennsylvania

ALLIANCE  
FOR  
PROGRESS  
CS

CS

42101

182139 CECIL B  
MOORE AVE

PHILADEL PA

19121 †

1-Yes

1-Primary

8

ANTONIA  
PANTOJA  
COMMUNITY  
CHARTER  
SCHOOL

Pennsylvania

ANTONIA  
PANTOJA  
COMMUNITY  
CHARTER  
SCHOOL

SCHOOL

42101

4101 NORTH  
AMERICAN ST

PHILADEL PA

19140 †

1-Yes

1-Primary

ARISE

ARISE  
ACADEMY



## Untitled project

File Edit View Run Publish Resources Help



Code.gs

1  
2  
3  
4

## Google Apps Script



## Create script for

- [Blank Project](#)
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- [Spreadsheet](#)
- [Document](#)
- [Form](#)
- [GMail](#)
- [Calendar](#)
- [Sites](#)

## Tutorials

- [Building Your First Script](#)
- [Custom Functions in Spreadsheets](#)
- [Creating Gmail Inbox Statistics Reports](#)
- [Embedding Apps Script in Google Sites](#)
- [Time Booking Application](#)

## Open a recent project

No projects found

 Don't show again

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*Untitled project*

File Edit View Run Publish Resources Help



myFunction

Code.gs ▾

Code.gs ×

```
1 function myFunction() {  
2   |  
3 }  
4
```



# Untitled project

File Edit View Run Publish Resources Help

myFunction

Code.gs ▾

Code.gs x

```
1 function myFunction() {  
2  
3 }  
4
```

*Untitled project*

File Edit View Run Publish Resources Help



myFunction

Code.gs ▾

\* Code.gs x

1 |

## Untitled project

File Edit View Run Publish Resources Help

myFunction

Code.gs

\* Code.gs

```
489 // If we have an id, lon, and lat
490 if (obj[settings.id] && coordinates) {
491 // Define a new GeoJSON feature object
492 var feature = {
493   type: 'Feature',
494   // Get ID from UI
495   id: obj[settings.id],
496   geometry: {
497     type: 'Point',
498     // Get coordinates from UIr
499     coordinates: coordinates
500   },
501   // Place holder for properties object
502   properties: obj
503 };
504 objects.push(feature);
505 }
506 }
507 return objects;
508 }
509
510 // Normalizes a string, by removing all non alphanumeric characters and using mixed case
511 // to separate words.
512 function cleanCamel(str) {
513   return str
514     .replace(/\s./g, function($1) { return $1.toUpperCase(); })
515     .replace(/\s/g, '')
516     .replace(/[\^w]/g, '')
517     .replace(/^(.)/, function($1) { return $1.toLowerCase(); });
518 }
519
```

← **Untitled project**File **Rename** w Run Publish Resources Help

myFunction

Code.gs

\* Code.gs

```
489 // If we have an id, lon, and lat
490 if (obj[settings.id] && coordinates) {
491 // Define a new GeoJSON feature object
492 var feature = {
493 type: 'Feature',
494 // Get ID from UI
495 id: obj[settings.id],
496 geometry: {
497 type: 'Point',
498 // Get coordinates from UIr
499 coordinates: coordinates
500 },
501 // Place holder for properties object
502 properties: obj
503 };
504 objects.push(feature);
505 }
506 }
507 return objects;
508 }
509
510 // Normalizes a string, by removing all non alphanumeric characters and using mixed case
511 // to separate words.
512 function cleanCamel(str) {
513 return str
514 .replace(/\s(.)/g, function($1) { return $1.toUpperCase(); })
515 .replace(/\s/g, '')
516 .replace(/[\^\w]/g, '')
517 .replace(/^(.)/, function($1) { return $1.toLowerCase(); });
518 }
519
```

## Untitled project

File Edit View Run Publish Resources Help

myFunction

Code.gs

\* Code.gs

```
489 // If we have an id, lon, and lat
490 if (obj[settings.id] && coordinates) {
491 // Define a new GeoJSON feature object
492 var feature = {
493 type: 'Feature',
494 // Get ID from UI
495 id:
496 ge
497
498
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500 },
501 //
502 pr
503 };
504 obje
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515 .replace(/\s/g, '')
516 .replace(/^[^w]/g, '')
517 .replace(/^(.)/, function($1) { return $1.toLowerCase(); });
518 }
519
```

**Rename Project**

Enter new project name

OK

Cancel

## Untitled project

File Edit View Run Publish Resources Help

Code.gs

\* Code.gs

```
489 // If we have an id, lon, and lat
490 if (obj[settings.id] && coordinates) {
491 // Define a new GeoJSON feature object
492 var feature = {
493 type: 'Feature',
494 // Get ID from UI
495 id:
496 ge
497
498
499
500 },
501 //
502 pr
503 };
504 obje
505 }
506 }
507 return objects;
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510 // Normalizes a string, by removing all non alphanumeric characters and using mixed case
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515 .replace(/\s/g, '')
516 .replace(/^[^w]/g, '')
517 .replace(/^(.)/, function($1) { return $1.toLowerCase(); });
518 }
519
```

## Rename Project

Enter new project name

OK

Cancel

## Geo

File Edit View Run Publish Resources Help

New

Open...

Ctrl+O

See revision history

Ctrl+Alt+Shift+G

Rename...

Delete...

Make a copy...

Save

Ctrl+S

Save all

Ctrl+Shift+S

Manage versions... EXPERIMENTAL!

Upgrade authorization experience...

Project properties

Build a user interface... DEPRECATED!

```
510 // Normalizes a string, by removing all non alphanumeric characters and using mixed case
511 // to separate words.
512 function cleanCamel(str) {
513     return str
514         .replace(/\s(.)/g, function($1) { return $1.toUpperCase(); })
515         .replace(/\s/g, '')
516         .replace(/[\^\w]/g, '')
517         .replace(/^(.)/, function($1) { return $1.toLowerCase(); });
518 }
519
```

## charterschools\_pa

Christine Murray

File Edit View Insert Format Data Tools Help Geo Last edit was 2 days ago

Comments

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	A	B	C	D	E	F	G	H	I	J	K
1	School Name	State Name [Public School] Latest available year	School Name [Public School] 2010-11	County Number [Public School] 2010-11	Location Address [Public School] 2010-11	Location City [Public School] 2010-11	Location State Abbr [Public School] 2010-11	Location ZIP [Public School] 2010-11	Location ZIP4 [Public School] 2010-11	Charter School [Public School] 2010-11	School Level Code [Public School] 2010-11
2	21ST CENTURY CYBER CS	Pennsylvania	21ST CENTURY CYBER CS	42029	805 SPRINGDALE DR	DOWNING	PA	19335	3043	1-Yes	4-Other
3	ACADEMY CS	Pennsylvania	ACADEMY CS	42003	900 AGNEW RD	PITTSBUR	PA	15227	†	1-Yes	3-High
4	ACHIEVEMENT HOUSE CS	Pennsylvania	ACHIEVEMENT HOUSE CS	42029	222 VALLEY CREEK BLVD	EXTON	PA	19341	2635	1-Yes	3-High
5	AD PRIMA CS	Pennsylvania	AD PRIMA CS	42101	3556 FRANKFORD AVE	PHILADEL	PA	19134	†	1-Yes	1-Primary
6	AGORA CYBER CS	Pennsylvania	AGORA CYBER CS	42029	995 OLD EAGLE SCHOOL RD	WAYNE	PA	19087	†	1-Yes	4-Other
7	ALLIANCE FOR PROGRESS CS	Pennsylvania	ALLIANCE FOR PROGRESS CS	42101	182139 CECIL B MOORE AVE	PHILADEL	PA	19121	†	1-Yes	1-Primary
8	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	Pennsylvania	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	42101	4101 NORTH AMERICAN ST	PHILADEL	PA	19140	†	1-Yes	1-Primary
	ARISE		ARISE ACADEMY								



## charterschools\_pa

Christine Murray

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Comments

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	A	B	C	D	E	F	G	H	I	J	K
1	School Name	State Name [Public School] Latest available year	School Name [Public School] 2010-11	County Number [Public School] 2010-11	Location Address [Public School] 2010-11	Location City [Public School] 2010-11	Location State Abbr [Public School] 2010-11	Location ZIP [Public School] 2010-11	Location ZIP4 [Public School] 2010-11	Charter School [Public School] 2010-11	School Level Code [Public School] 2010-11
2	21ST CENTURY CYBER CS	Pennsylvania	21ST CENTURY CYBER CS	42029	805 SPRINGDALE DR	DOWNING	PA	19335	3043	1-Yes	4-Other
3	ACADEMY CS	Pennsylvania	ACADEMY CS	42003	900 AGNEW RD	PITTSBUR	PA	15227	†	1-Yes	3-High
4	ACHIEVEMENT HOUSE CS	Pennsylvania	ACHIEVEMENT HOUSE CS	42029	222 VALLEY CREEK BLVD	EXTON	PA	19341	2635	1-Yes	3-High
5	AD PRIMA CS	Pennsylvania	AD PRIMA CS	42101	3556 FRANKFORD AVE	PHILADEL	PA	19134	†	1-Yes	1-Primary
6	AGORA CYBER CS	Pennsylvania	AGORA CYBER CS	42029	995 OLD EAGLE SCHOOL RD	WAYNE	PA	19087	†	1-Yes	4-Other
7	ALLIANCE FOR PROGRESS CS	Pennsylvania	ALLIANCE FOR PROGRESS CS	42101	182139 CECIL B MOORE AVE	PHILADEL	PA	19121	†	1-Yes	1-Primary
8	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	Pennsylvania	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	42101	4101 NORTH AMERICAN ST	PHILADEL	PA	19140	†	1-Yes	1-Primary
	ARISE		ARISE ACADEMY								

Geocode Addresses | Export GeoJSON | Help

	A	B	C	D		H	I	J	K		
	School Name	State Name [Public School] Latest available year	School Name [Public School] 2010-11	County Number [Public School] 2010-11	Location Address [Public School] 2010-11	Location City [Public School] 2010-11	State Abbr [Public School] 2010-11	Location ZIP [Public School] 2010-11	Location ZIP4 [Public School] 2010-11	Charter School [Public School] 2010-11	School Level Code [Public School] 2010-11
2	21ST CENTURY CYBER CS	Pennsylvania	21ST CENTURY CYBER CS	42029	805 SPRINGDALE DR	DOWNING PA	19335	3043	1-Yes	4-Other	
3	ACADEMY CS	Pennsylvania	ACADEMY CS	42003	900 AGNEW RD	PITTSBUR PA	15227	†	1-Yes	3-High	
4	ACHIEVEMENT HOUSE CS	Pennsylvania	ACHIEVEMENT HOUSE CS	42029	222 VALLEY CREEK BLVD	EXTON PA	19341	2635	1-Yes	3-High	
5	AD PRIMA CS	Pennsylvania	AD PRIMA CS	42101	3556 FRANKFORD AVE	PHILADEL PA	19134	†	1-Yes	1-Primary	
6	AGORA CYBER CS	Pennsylvania	AGORA CYBER CS	42029	995 OLD EAGLE SCHOOL RD	WAYNE PA	19087	†	1-Yes	4-Other	
7	ALLIANCE FOR PROGRESS CS	Pennsylvania	ALLIANCE FOR PROGRESS CS	42101	182139 CECIL B MOORE AVE	PHILADEL PA	19121	†	1-Yes	1-Primary	
8	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	Pennsylvania	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	42101	4101 NORTH AMERICAN ST	PHILADEL PA	19140	†	1-Yes	1-Primary	
	ARISE		ARISE ACADEMY								

	A	B	C	D	E	F	G	H	I	J	K	
1	School Name	State Name [Public School] Latest available year	School Name [Public School] 2010-11	County Number [Public School] 2010-11	Location Address [Public School] 2010-11	Location City [Public School] 2010-11	Location State Abbr [Public School] 2010-11	Location ZIP [Public School] 2010-11	Location ZIP4 [Public School] 2010-11	Charter School [Public School] 2010-11	School Level Code [Public School] 2010-11	
2	21ST CENTURY CYBER CS	Pennsylvania	21ST CENTURY CYBER CS	4202					35	3043	1-Yes	4-Other
3	ACADEMY CS	Pennsylvania	ACADEMY CS	4200					27		1-Yes	3-High
4	ACHIEVEMENT HOUSE CS	Pennsylvania	ACHIEVEMENT HOUSE CS	4202					41	2635	1-Yes	3-High
5	AD PRIMA CS	Pennsylvania	AD PRIMA CS	4210					34		1-Yes	1-Primary
6	AGORA CYBER CS	Pennsylvania	AGORA CYBER CS	4202					87		1-Yes	4-Other
7	ALLIANCE FOR PROGRESS CS	Pennsylvania	ALLIANCE FOR PROGRESS CS	42101	182139 CECIL B MOORE AVE	PHILADEL PA		19121			1-Yes	1-Primary
8	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	Pennsylvania	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	42101	4101 NORTH AMERICAN ST	PHILADEL PA		19140			1-Yes	1-Primary
	ARISE		ARISE ACADEMY									

**Authorization Required**

This app needs authorization to run.

Firefox

My Drive - Google Drive | charterschools\_pa

https://docs.google.com/spreadsheets/ccc?key=0AIRj81ahrIkDdHhUY3FfS1I1dE9MaG1TbXcya3h1UIE&usp=

Google

charterschools\_pa

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Request for Permission - Mozilla Firefox

https://accounts.google.com/o/oauth2/auth?client\_id=780150187032@developer.gserviceaccount.cor

Google

Christine Murray

Geo

This app would like to:

- View and manage your spreadsheets in Google Drive
- View and manage the files and documents in your Google Drive
- Connect to an external service

Geo and Google will use this information in accordance with their respective terms of service and privacy policies.

Cancel Accept

	A	B
1	School Name	State Name [Public School] Latest available year
2	21ST CENTURY CYBER CS	Pennsylh
3	ACADEMY CS	Pennsylh
4	ACHIEVEMENT HOUSE CS	Pennsylh
5	AD PRIMA CS	Pennsylh
6	AGORA CYBER CS	Pennsylh
7	ALLIANCE FOR PROGRESS CS	Pennsylh
8	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	Pennsylh
	ARISE	ACADEMY

Sheet 1

Sum: 2601690

	A	B	C	D	E	F	G	H	I	J	K
1	School Name	State Name [Public School] Latest available year									School Level Code [Public School] 2010-11
2	21ST CENTURY CYBER CS	Pennsylv									4-Other
3	ACADEMY CS	Pennsylv									3-High
4	ACHIEVEMENT HOUSE CS	Pennsylv									3-High
5	AD PRIMA CS	Pennsylv									1-Primary
6	AGORA CYBER CS	Pennsylv									4-Other
7	ALLIANCE FOR PROGRESS CS	Pennsylv									1-Primary
8	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	Pennsylva	COMMUNITY CHARTER SCHOOL	42101	4101 NORTH AMERICAN ST	PHILADEL	PA	19140	†	1-Yes	1-Primary
	ARISE		ARISE ACADEMY								

### Geocode Addresses

The selected cells will be joined together and sent to a geocoding service. New columns will be added for longitude, latitude, and accuracy score. Select a geocoding API and enter your API key if required:

Geocoding service:

API key:

## MapQuest Nominatim Search API Web Service

[Get MapQuest AppKey](#)
[OPEN DATA APIs](#)
[» NOMINATIM API WEB SERVICE](#)

Nominatim (from the Latin, 'by name') is a tool to search [OpenStreetMap](#) (OSM) data by name and address and to generate synthetic addresses of OSM points (reverse geocoding). Located at <http://open.mapquestapi.com/nominatim/v1/search>, Nominatim is also used as one of the sources for the search box on the OSM homepage and currently powers the search for all the MapQuest Open Beta domains ([http://open.mapquest.\\*](http://open.mapquest.*)).

### Web Service Resources

#### [Nominatim Search API Developer's Guide](#)

Instructions, code samples, and demos all combined in easy-to-follow, easy-to-use documentation.

#### [Open Forums](#)

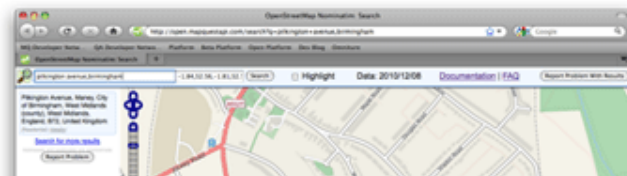
Discuss and collaborate with other Nominatim Search API Web Service developers.

See also: [Nominatim Broken Polygon Tool](#)

### Features

#### Search

Nominatim indexes named (or numbered) features with the OSM data set and a subset of other unnamed features (pubs, hotels, churches, etc).



Search terms are processed left to right so  
[pilkington avenue, birmingham](#)

will work, and  
[birmingham, pilkington avenue](#)

[Contact Us](#)


### Documentation

[Developer's Guide](#)  
[Forums](#)

### Open Data APIs

[Nominatim API Web Service](#)  
[Open Directions API Web Service](#)  
[Open Guidance API Web Service](#)  
[Open Elevation API Web Service](#)  
[Xapi API Web Service](#)

### Related

[Nominatim Broken Polygon Tool](#)

[Developer Blog](#)

	A	B	C	D	E	F	G	H	I	J	K
1	School Name	State Name [Public School] Latest available year									School Level Code [Public School] 2010-11
2	21ST CENTURY CYBER CS	Pennsylv									4-Other
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5	AD PRIMA CS	Pennsylv									1-Primary
6	AGORA CYBER CS	Pennsylv									4-Other
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8	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	Pennsylva	COMMUNITY CHARTER SCHOOL	42101	4101 NORTH AMERICAN ST	PHILADEL PA	19140	†		1-Yes	1-Primary
	ARISE ACADEMY										

### Geocode Addresses

The selected cells will be joined together and sent to a geocoding service. New columns will be added for longitude, latitude, and accuracy score. Select a geocoding API and enter your API key if required:

Geocoding service:

API key:

	A	B	C	D	E	F	G	H	I	J	K
1	School Name	State Name [Public School] Latest available year								geo_latitude	geo_accurac
2	21ST CENTURY CYBER CS	Pennsylv									
3	ACADEMY CS	Pennsylv									
4	ACHIEVEMENT HOUSE CS	Pennsylv									
5	AD PRIMA CS	Pennsylv								39.9976943125	house
6	AGORA CYBER CS	Pennsylv									
7	ALLIANCE FOR PROGRESS CS	Pennsylv								39.977159	tertiary
8	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	Pennsylv	COMMUNITY CHARTER SCHOOL	42101	4101 NORTH AMERICAN ST	PHILADEL PA	19140	-75.1313485050505	40.0130096868687		house
	ARISE		ARISE ACADEMY								

### Geocode Addresses

Geocoding these addresses...







## charterschools\_pa ☆

Christine Murray ▾

File Edit View Insert Format Data Tools Help Geo

Comments

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	A	B	C	D	E	F	G	H	I	J	K	L
18	CAREER CONNECTIONS CHS	Pennsylvania	CAREER CONNECTIONS CHS	42003	4412 BUTLER ST	PITTSBUR PA		15201	-79.959582299	40.471588916	house	†
19	CENTER FOR STUDENT LRNG CS PENNSBURY	Pennsylvania	CENTER FOR STUDENT LRNG CS PENNSBURY	42017	345 LAKESIDE DR	LEVITTOW PA		19054	-74.816296910	40.149044316	house	†
20	CENTRAL PA DIGITAL LRNG FOUNDATION CS	Pennsylvania	CENTRAL PA DIGITAL LRNG FOUNDATION CS	42013	1500 4TH AVE	ALTOONA PA		16602	-78.397181	40.508475	house	†
21	CENTRE LEARNING COMMUNITY CS	Pennsylvania	CENTRE LEARNING COMMUNITY CS	42027	2643 WEST COLLEGE AVE	STATE COLLEGE PA		16801	-77.866367	40.7908499	secondary	†
22	CHARTER HIGH SCHOOL FOR ARCHITECTURE AND DESIGN	Pennsylvania	CHARTER HIGH SCHOOL FOR ARCHITECTURE AND DESIGN	42101	105 SOUTH 7TH ST	PHILADEL PA		19106	-75.15226575	39.949254375	house	3
23	CHESTER CO FAMILY ACADEMY CS	Pennsylvania	CHESTER CO FAMILY ACADEMY CS	42029	323 EAST GAY ST	WEST CHESTER PA		19380	-75.596604	39.964258	residential	†
24	CHESTER		CHESTER COMMUNITY		302 EAST 5TH							

	A	B	C	D	E	F	G	H	I	J	K
1	School Name	State Name [Public School] Latest available year	School Name [Public School] 2010-11	County Number [Public School] 2010-11	Location Address [Public School] 2010-11	Location City [Public School] 2010-11	Location State Abbr [Public School] 2010-11	Location ZIP [Public School] 2010-11	geo_longitude	geo_latitude	geo_accurac
2	21ST CENTURY CYBER CS	Pennsylvania	21ST CENTURY CYBER CS	42029	805 SPRINGDALE DR	DOWNING	PA	19335			
3	ACADEMY CS	Pennsylvania	ACADEMY CS	42003	900 AGNEW RD	PITTSBUR	PA	15227			
4	ACHIEVEMENT HOUSE CS	Pennsylvania	ACHIEVEMENT HOUSE CS	42029	222 VALLEY CREEK BLVD	EXTON	PA	19341			
5	AD PRIMA CS	Pennsylvania	AD PRIMA CS	42101	3556 FRANKFORD AVE	PHILADEL	PA	19134	-75.1021534375	39.9976943125	house
6	AGORA CYBER CS	Pennsylvania	AGORA CYBER CS	42029	995 OLD EAGLE SCHOOL RD	WAYNE	PA	19087			
7	ALLIANCE FOR PROGRESS CS	Pennsylvania	ALLIANCE FOR PROGRESS CS	42101	182139 CECIL B MOORE AVE	PHILADEL	PA	19121	-75.14608	39.977159	tertiary
8	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	Pennsylvania	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	42101	4101 NORTH AMERICAN ST	PHILADEL	PA	19140	-75.1313485050505	40.0130096868687	house
	ARISE		ARISE ACADEMY								



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	A	B	C	D	E	F	G	H	I	J	K	L
1	School Name	State Name [Public School] Latest available year	School Name [Public School] 2010-11	County Number [Public School] 2010-11	Location Address [Public School] 2010-11	Location City [Public School] 2010-11	Location State Abbr [Public School] 2010-11	Location ZIP [Public School] 2010-11	geo_longitude	geo_latitude	geo_accuracy	Location ZIP4 [Public School] 2010-
2	21ST CENTURY CYBER CS	Pennsylvania	21ST CENTURY CYBER CS	42029	805 SPRINGDALE DR	DOWNING	PA	19335				3
3	ACADEMY CS	Pennsylvania	ACADEMY CS	42003	900 AGNEW RD	PITTSBUR	PA	15227				†
4	ACHIEVEMENT HOUSE CS	Pennsylvania	ACHIEVEMENT HOUSE CS	42029	222 VALLEY CREEK BLVD	EXTON	PA	19341				2
5	AD PRIMA CS	Pennsylvania	AD PRIMA CS	42101	3556 FRANKFORD AVE	PHILADEL	PA	19134	-75.102153437	39.997694312	house	†
6	AGORA CYBER CS	Pennsylvania	AGORA CYBER CS	42029	995 OLD EAGLE SCHOOL RD	WAYNE	PA	19087				†
7	ALLIANCE FOR PROGRESS CS	Pennsylvania	ALLIANCE FOR PROGRESS CS	42101	182139 CECIL B MOORE AVE	PHILADEL	PA	19121	-75.14608	39.977159	tertiary	†
8	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	Pennsylvania	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	42101	4101 NORTH AMERICAN ST	PHILADEL	PA	19140	-75.131348505	40.013009686	house	†
	ARISE		ARISE ACADEMY									

	A	B	C	D	E	F	G	H	I	J	K	L
1	School Name	State Name [Public School] Latest available year	School Name [Public School] 2010-11	County Number [Public School] 2010-11	Location Address [Public School] 2010-11	Location City [Public School] 2010-11	State Abbr [Public School] 2010-11	Location ZIP [Public School] 2010-11	geo_longitude	geo_latitude	geo_accuracy	Location ZIP4 [Public School] 2010-
2	21ST CENTURY CYBER CS	Pennsylvania	21ST CENTURY CYBER CS	42029	805 SPRINGDALE DR	DOWNING	PA	19335				3
3	ACADEMY CS	Pennsylvania	ACADEMY CS	42003	900 AGNEW RD	PITTSBUR	PA	15227				†
4	ACHIEVEMENT HOUSE CS	Pennsylvania	ACHIEVEMENT HOUSE CS	42029	222 VALLEY CREEK BLVD	EXTON	PA	19341				2
5	AD PRIMA CS	Pennsylvania	AD PRIMA CS	42101	3556 FRANKFORD AVE	PHILADEL	PA	19134	-75.102153437	39.997694312	house	†
6	AGORA CYBER CS	Pennsylvania	AGORA CYBER CS	42029	995 OLD EAGLE SCHOOL RD	WAYNE	PA	19087				†
7	ALLIANCE FOR PROGRESS CS	Pennsylvania	ALLIANCE FOR PROGRESS CS	42101	182139 CECIL B MOORE AVE	PHILADEL	PA	19121	-75.14608	39.977159	tertiary	†
8	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	Pennsylvania	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	42101	4101 NORTH AMERICAN ST	PHILADEL	PA	19140	-75.131348505	40.013009686	house	†
	ARISE		ARISE ACADEMY									

	A	B	C	D	E	F	G	H	I	J	K	L
1	School Name	State Name [Public School] Latest available year										Locati ZIP4 [Public Schoc 2010-
2	21ST CENTURY CYBER CS	Pennsylv								itude	geo_accuracy	
3	ACADEMY CS	Pennsylv										3
4	ACHIEVEMENT HOUSE CS	Pennsylv										†
5	AD PRIMA CS	Pennsylv								694312	house	†
6	AGORA CYBER CS	Pennsylv										†
7	ALLIANCE FOR PROGRESS CS	Pennsylv								77159	tertiary	†
8	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	Pennsylv	COMMON T CHARTER SCHOOL	42101	4101 NORTH AMERICAN ST	PHILADEL PA		19140	-75.131348505	40.013009686	house	†
	ARISE ACADEMY											

### Geocode Addresses

The selected cells will be joined together and sent to a geocoding service. New columns will be added for longitude, latitude, and accuracy score. Select a geocoding API and enter your API key if required:

Geocoding service: mapquest

API key:

- mapquest
- yahoo
- cicero

	A	B	C	D	E	F	G	H	I	J	K	L
1	School Name	State Name [Public School] Latest available year										Locati ZIP4 [Public Schoc 2010-
2	21ST CENTURY CYBER CS	Pennsylv										3
3	ACADEMY CS	Pennsylv										†
4	ACHIEVEMENT HOUSE CS	Pennsylv										2
5	AD PRIMA CS	Pennsylv								694312	house	†
6	AGORA CYBER CS	Pennsylv										†
7	ALLIANCE FOR PROGRESS CS	Pennsylv								77159	tertiary	†
8	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	Pennsylv	COMMUNIT CHARTER SCHOOL	42101	4101 NORTH AMERICAN ST	PHILADEL PA	19140	-75.131348505	40.013009686		house	†
	ARISE		ARISE ACADEMY									

### Geocode Addresses

Geocoding these addresses...

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	A	B	C	D	E	F	G	H	I	J	K	L
1	School Name	State Name [Public School] Latest available year	School Name [Public School] 2010-11	County Number [Public School] 2010-11	Location Address [Public School] 2010-11	Location City [Public School] 2010-11	Location State Abbr [Public School] 2010-11	Location ZIP [Public School] 2010-11	geo_longitude	geo_latitude	geo_accuracy	Location ZIP4 [Public School] 2010-
2	21ST CENTURY CYBER CS	Pennsylvania	21ST CENTURY CYBER CS	42029	805 SPRINGDALE DR	DOWNING	PA	19341				3
3	ACADEMY CS	Pennsylvania	ACADEMY CS	42003	900 AGNEW RD	PITTSBUR	PA	15227	-79.9900861	40.4416941	city	†
4	ACHIEVEMENT HOUSE CS	Pennsylvania	ACHIEVEMENT HOUSE CS	42029	222 VALLEY CREEK BLVD	EXTON	PA	19341	-75.629009360	40.0299125	census	2
5	AD PRIMA CS	Pennsylvania	AD PRIMA CS	42101	3556 FRANKFORD AVE	PHILADEL	PA	19134	-75.102153437	39.997694312	house	†
6	AGORA CYBER CS	Pennsylvania	AGORA CYBER CS	42029	995 OLD EAGLE SCHOOL RD	WAYNE	PA	19087				†
7	ALLIANCE FOR PROGRESS CS	Pennsylvania	ALLIANCE FOR PROGRESS CS	42101	182139 CECIL B MOORE AVE	PHILADEL	PA	19121	-75.14608	39.977159	tertiary	†
8	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	Pennsylvania	ANTONIA PANTOJA COMMUNITY CHARTER SCHOOL	42101	4101 NORTH AMERICAN ST	PHILADEL	PA	19140	-75.131348505	40.013009686	house	†
	ARISE		ARISE ACADEMY									



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Import...

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Download as

Publish to the web...

Email collaborators...

Email as attachment...

Print

Ctrl+P

Microsoft Excel (.xlsx)

OpenDocument format (.ods)

PDF document (.pdf)

Comma Separated Values (.csv, current sheet)

Plain text (.txt, current sheet)

Web page (.html, current sheet)

	D	E	F	G	H	I	J	K	L			
1	County	Location	Location	Location	Location							
	number	Address	City	State	ZIP				ZIP4			
	[Public	[Public	[Public	[Public	[Public				[Public			
	School]	School]	School]	School]	School]	geo_longitude	geo_latitude	geo_accuracy	School			
	2010-11	2010-11	2010-11	2010-11	2010-11				2010-			
2		805 SPRINGDALE DR	DOWNING	PA	19341							
3		42003 900 AGNEW RD	PITTSBUR	PA	15227	-79.9900861	40.4416941	city	†			
4		42029 222 VALLEY CREEK BLVD	EXTON	PA	19341	-75.629009360	40.0299125	census	2			
5												
6						34 -75.102153437	39.997694312	house	†			
7						37			†			
						21 -75.14608	39.977159	tertiary	†			
8	PANTOJA COMMUNITY CHARTER SCHOOL	Pennsylv	PANTOJA COMMUNITY CHARTER SCHOOL	42101	4101 NORTH AMERICAN ST	PHILADEL	PA	19140	-75.131348505	40.013009686	house	†
	ARISE		ARISE ACADEMY									

# Geocoding accuracy depends on:

- Accuracy of the reference data
- Accuracy of the input data

# Geocoding uses

- Visualizing locations
- Exploring spatial relationships
- Overlaying with other data (demographic, etc.)

# More information:

<http://guides.library.upenn.edu/geocodingoptions>

## Intro to Geocoding

Tags: [Tutorial](#), [geocoding](#), [gis](#)

Overview

Tutorial ▾

Options

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### Geocoding Examples

- Maantay, J. (2007). Asthma and air pollution in the Bronx: Methodological and data considerations in using GIS for environmental justice and health research. *Health & Place*, 13(1), 32-56.
- Culhane, D. P., Lee, C., & Wachter, S. M. (1996). Where the homeless come from: A study of the prior address distribution of families admitted to public shelters in New York City and Philadelphia. *Housing Policy Debate*, 7(2), 327-365.
- Debbink, M. P., & Bader, M. D. M. (2011). Racial residential segregation and low birth weight in Michigan's metropolitan areas. *American Journal of Public Health*, 101(9), 1714-1720.

### Geocoding Accuracy

- Duncan, D. T., Castro, M. C., Blossom, J. C., Bennett, G. G., & Gortmaker, S. L. (2011). Evaluation of the positional difference between two common geocoding methods. *Geospatial health*, 5(2), 265-273.
- Hart, T. C., & Zandbergen, P. A. (2013). Reference data and geocoding quality: Examining completeness and positional accuracy of street geocoded crime incidents. *Policing: An International Journal of Police Strategies & Management*,

### Geocoding Tools

- [Geo for Google Docs](#)  
Script that geocodes addresses within Google Spreadsheets, using MapQuest or Yahoo geocoding APIs.
- [BatchGeo](#)  
Will geocode up to 250 addresses and plot on a Google Map. Once the map has been created scroll down for the link to download as a KML file.
- [Geocommons](#)  
Geocodes up to 5,000 addresses in one CSV.
- [ArcGIS Online](#)  
Geocodes up to 250 addresses.
- [GPS Visualizer](#)
- [Stata: Geocode command](#)  
This utilizes the Google Maps to return altitude and longitude within the statistical package Stata.
- [CartoDB](#)  
Geocoding for a limited number of records.
- [Excel Geocoding Tool](#)
- [Texas A&M Geoservices](#)  
Free of charge in allotments of 2500 transactions.

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- **Dec 10:** Secrets of the *Congressional Record* with Melanie Maskin
- **Jan 15:** Bureau of Labor Statistics with Michele Hayslett
- **Feb TBD:** Keeping up with Congress with Jeremy Darrington
- **March TBD:** Legislative histories with Kathleen Fleming

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