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Geometry Commands

Convert

Convert a geometry from one format to another.

Short Name	Long Name	Description
-i	--input	The input geometry
-f	--format	The output format (wkt, geojson, gml2, gml3, kml, georss, gpx, csv, wkb)
-p	--format-options	The output format options
-t	--type	The output type (geometry, feature, layer)
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc geometry convert -i "POINT(-122.386371 47.581154)" -f geojson -t feature
```

```
{"type":"Feature","geometry":{"type":"Point","coordinates":[-122.3864,47.5812]},
"properties":{},"id":"1"}
```

Decimal Degrees to Point

Convert a decimal degrees formatted string into a Point.

Short Name	Long Name	Description
-d	--decimaldegrees	The decimal degrees
-t	--type	The output type (xy, wkt, json)
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc geometry dd2pt -d "122d 31m 32.23s W, 47d 12m 43.28s N" -t wkt
```

```
POINT (-122.52561944444444 47.212022222222224)
```

GeoHash Bounds

Calculate the geohashes for the given bounds.

Short Name	Long Name	Description
-b	--bounds	The input geometry
-t	--type	The encoding type (string or long). The default is string.
-n	--number-of-chars	The number of characters. The default is 9.
-d	--bit-depth	The bit depth. The default is 52.
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc geometry geohash bounds -b "120, 30, 120.0001, 30.0001" -t long -d 45
```

```
28147497671064
28147497671068
28147497671112
28147497671066
28147497671070
28147497671114
28147497671088
28147497671092
28147497671136
```

GeoHash Decode

Decode a GeoHash to a Geometry.

Short Name	Long Name	Description
-i	--input	The input geohash
-t	--type	Whether the geohash is a point or bounds
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc geometry geohash decode -i uf8vk6wjr -t point
```

```
POINT (35.00001668930054 60.00000715255737)
```

GeoHash Encode

Encode a Geometry as a GeoHash.

Short Name	Long Name	Description
-i	--input	The input geometry
-t	--type	The encoding type (string or long). The default is string.
-n	--number-of-chars	The number of characters. The default is 9.
-d	--bit-depth	The bit depth. The default is 52.
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc geometry geohash encode -i "POINT(-122.386371 47.581154)"
```

```
c22yxjbuq
```

GeoHash Neighbors

Get a geohash's neighbors.

Short Name	Long Name	Description
-i	--input	The input geometry
-n	--number-of-chars	The number of characters. The default is 9.
-d	--bit-depth	The bit depth. The default is 52.
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc geometry geohash neighbors -i uf8vk6wjr
```

```
NORTH,uf8vk6wjx
NORTHEAST,uf8vk6wm8
EAST,uf8vk6wm2
SOUTHEAST,uf8vk6wm0
SOUTH,uf8vk6wjp
SOUTHWEST,uf8vk6wjn
WEST,uf8vk6wjq
NORTHWEST,uf8vk6wjw
```

Great Circle Arc

Create a great circle arc.

Short Name	Long Name	Description
-e	--ellipsoid	The ellipsoid
-p	--start-point	The start point
-t	--end-point	The end point
-n	--num-points	The number of points
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc geometry greatcirclearc -p POINT (-122 48) -t POINT (-0.102938 51.498749) -e
wgs84 -n 20
```

```
LINESTRING (-119.07040273132067 50.67129040608734, -115.79405787410982
53.25898813815459, -112.10566632488812 55.74416257443563, -107.93031121546862
58.102903619395605, -103.18586832746001 60.30516464523606, -97.78964326539094
62.313702219535685, -91.67188919322786 64.08357246715578, -84.79846274611634
65.56300075396796, -77.20148714844558 66.69673003845362, -69.00888413693454
67.4327000137296, -60.454039139748815 67.73150516117609, -51.847144661724116
67.57568999780139, -43.51024818547282 66.97446827309976, -35.70614774738105
65.96118559566465, -28.596592724101157 64.58499988892942, -22.24128289210202
62.90104269692094, -16.623473379491926 60.96269894447343, -11.681762264482387
58.81725900451406, -7.335682843452773 56.50439016948547, -3.501944007479139
54.05631263013969)
```

Offset

Create a Geometry offset from the input Geometry.

Short Name	Long Name	Description
-i	--input	The input geometry
-d	--offset	The offset distance
-s	--quadrant-segements	The number of quadrant segments (defaults to 8)
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc geometry offset -i LINESTRING (-120.41362631285119 47.87883318858252,
-3.9909723099333974 39.24424611524387) -d 5 -s 8
```

```
LINESTRING (-120.0438126769743 52.86513822084032, -3.621158674056503
44.23055114750167)
```

Orthodromic Distance

Calculate the orthodromic distance between two points..

Short Name	Long Name	Description
-e	--ellipsoid	The ellipsoid
-p	--start-point	The start point
-t	--end-point	The end point
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc geometry orthodromicdistance -p POINT (-122 48) -t POINT (-0.102938 51.498749) -e
wgs84
```

```
7674355.352400642
```

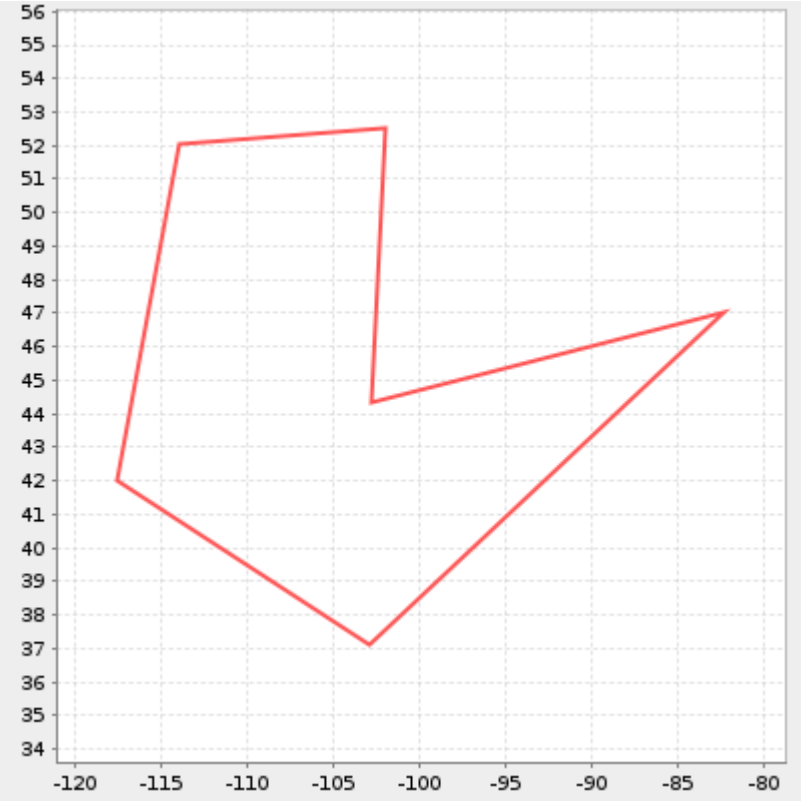
Plot

Draw a geometry to a plot.

Short Name	Long Name	Description
-i	--input	The input geometry
-f	--file	The output file

Short Name	Long Name	Description
-w	--width	The image width
-h	--height	The image height
-l	--legend	Whether to show the legend
-r	--fill-coords	Whether to fill coordinates
-p	--fill-polys	Whether to fill polygons
-d	--draw-coords	Whether to draw coordinates
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc geometry plot -i "POLYGON ((-113.98365269610397 52.04260423559353,
-117.55190821991903 41.99216856357597, -102.82940482544078 37.1267755781612,
-82.26457660787091 47.05513909003821, -102.75935045963138 44.33220905070587,
-101.89775634863287 52.5472919646931, -113.98365269610397 52.04260423559353))" -f
target/geometry_plot.png
```



Point to Decimal Degrees

Format a Point in Decimal Degrees.

Short Name	Long Name	Description
-p	--point	The Point

Short Name	Long Name	Description
-t	--type	The output type (dms, dms_char, ddm, ddm_char)
	--help	Print the help message
	--web-help	Open help in a browser

```
geoc geometry pt2dd -p "POINT (-122 48)" -t dms
```

```
-122° 0' 0.0000" W, 48° 0' 0.0000" N
```