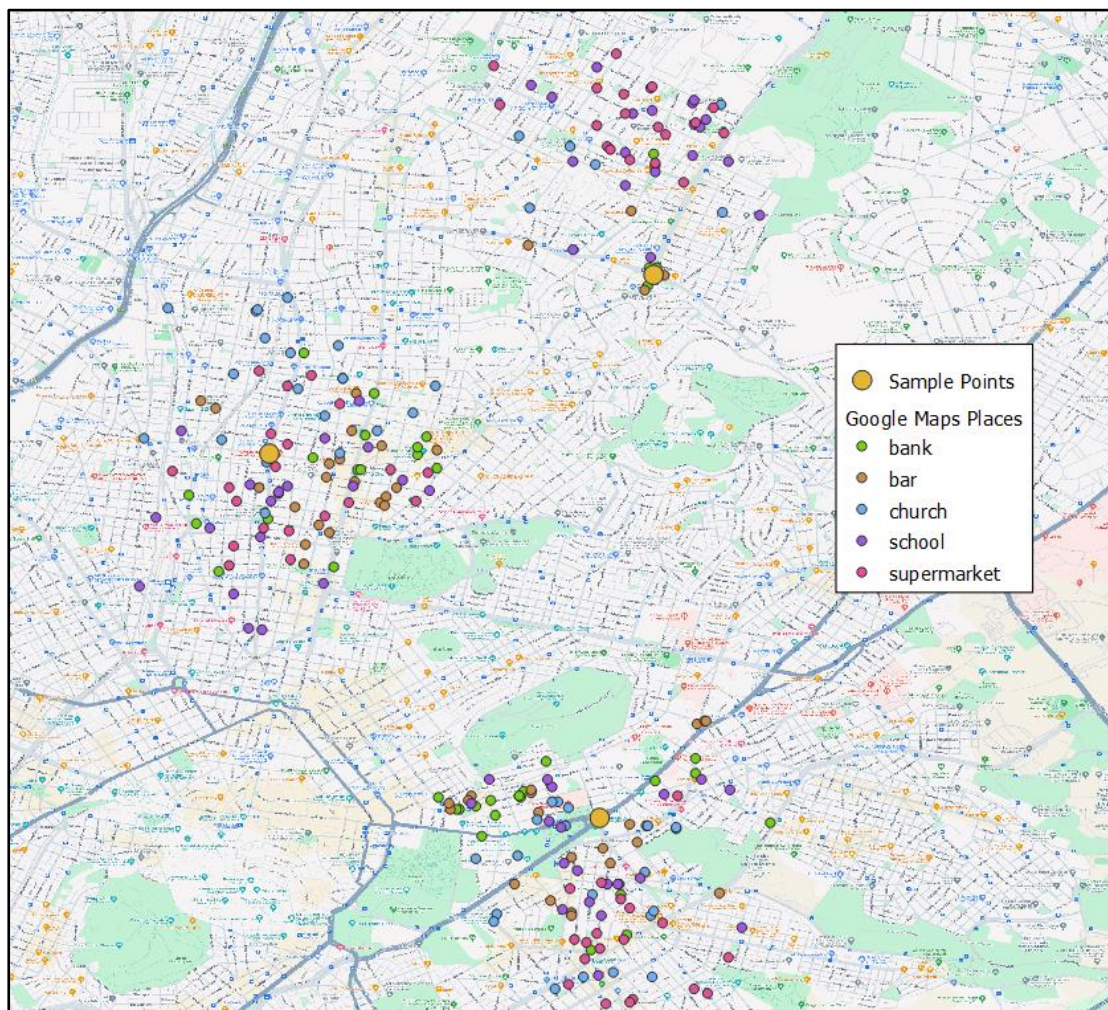# Google Maps Places Plugin for QGIS
## v0.1

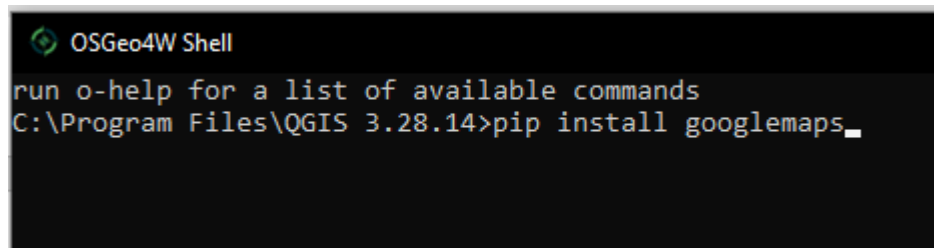A QGIS plugin to easily retrieve and attribute Google Maps Places

## Introduction

The Google Maps Places plugin aims to fill a significant gap in the geospatial open-source software community. It performs the basic functionalities of retrieving and attributing Google Maps Places (such as bars, cafes, parks, hospitals etc.) for a given area. This particular task is very often used in fields such as competition research, choosing the best location to open a store or a brunch, or for urban planning activities.

## Installation – Prerequisites

The plugin has a dependency on library googlemaps. It can be installed with pip through OSGeo4W Shell, simply run *pip install googlemaps*.
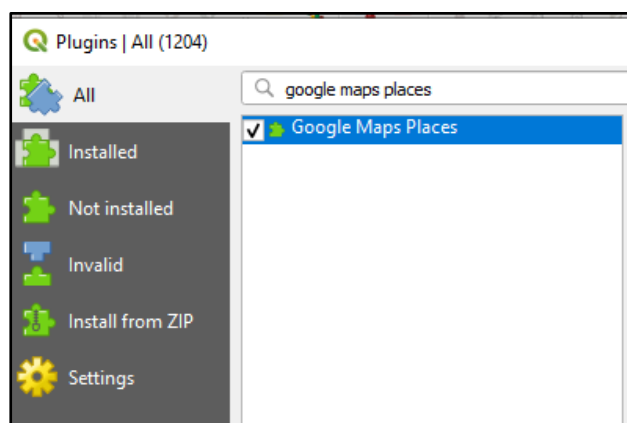


The plugin requires a Google Street View Static API key. Complete instructions can be found in this video. Overall, in order to generate a key, the following steps must be taken:

1. Create a Google account
2. Create a new project at Google Maps Platform
3. Enable billing for that project (**a valid credit or debit card is required, but no charge is made**)
4. From the Credentials page, create an API key
5. Copy the API key and use it as input for the plugin algorithms

**Staying free of charge:** With a creation of an API key, Google provides $200 worth of free requests, updated every month. The requests are billed based on the type of key used. For example, for a geocoding API, $200 correspond to 40.000 requests. This plugin uses a combination of the Nearby Search and the Place Details APIs. For more details on billing, check here.

To install the plugin, simply search for it in Plugins repository (Plugins menu -> Manage and Install plugins):
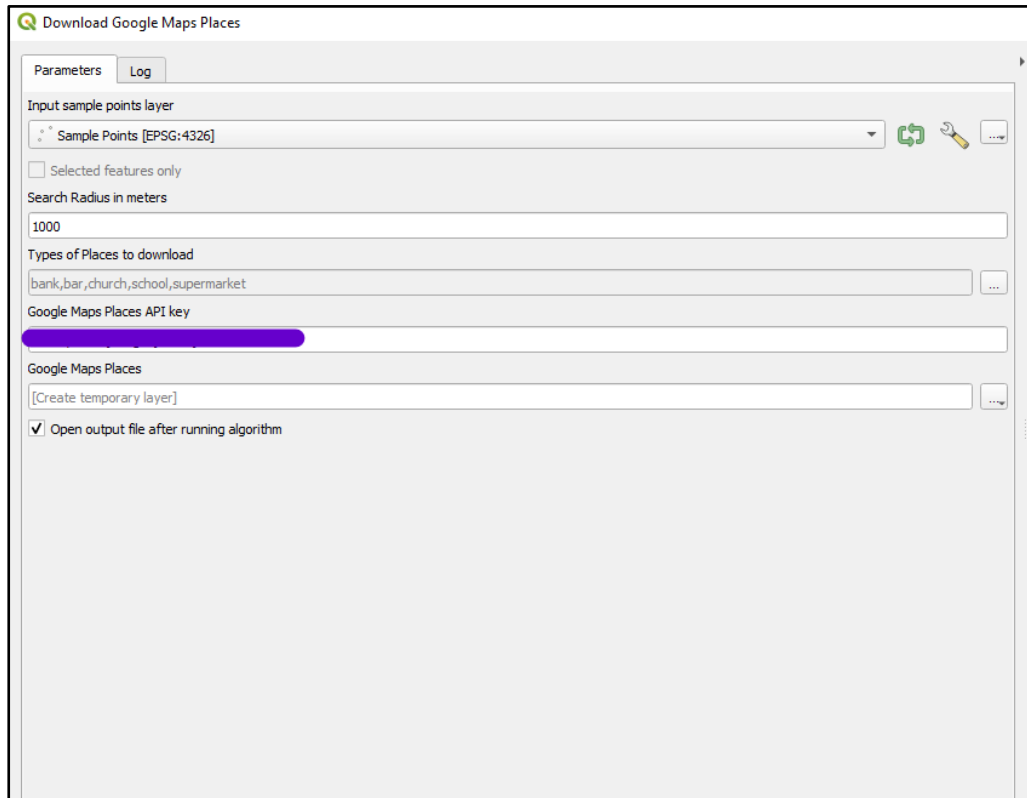
## Using the plugin

The plugin has two algorithms, meant to be run in the following order:

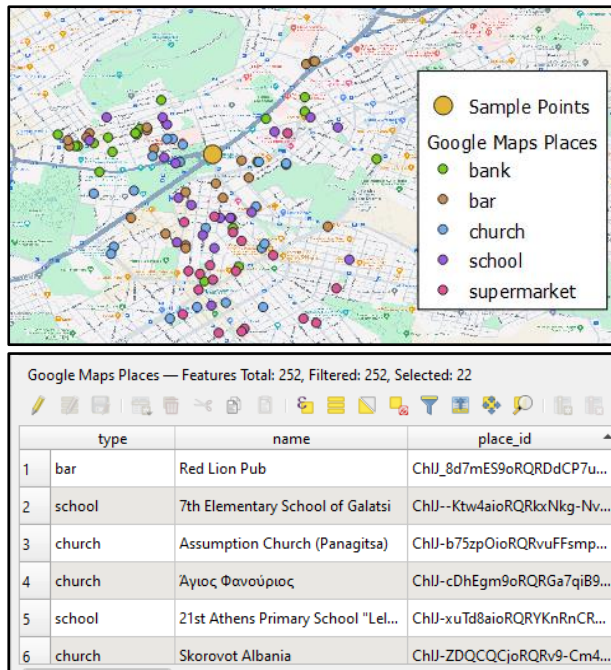1. Download Google Maps Places
2. Attribute Places

The first algorithm requires as input a point dataset (in WGS'84 Geographic), a search radius, a list of types of Places to download (bars, restaurants, etc.) and an API key. The algorithm uses the "Places nearby" method of Google Maps Platform. It will search for Places with the defined types within the defined radius from the points of the Input sample points layer.
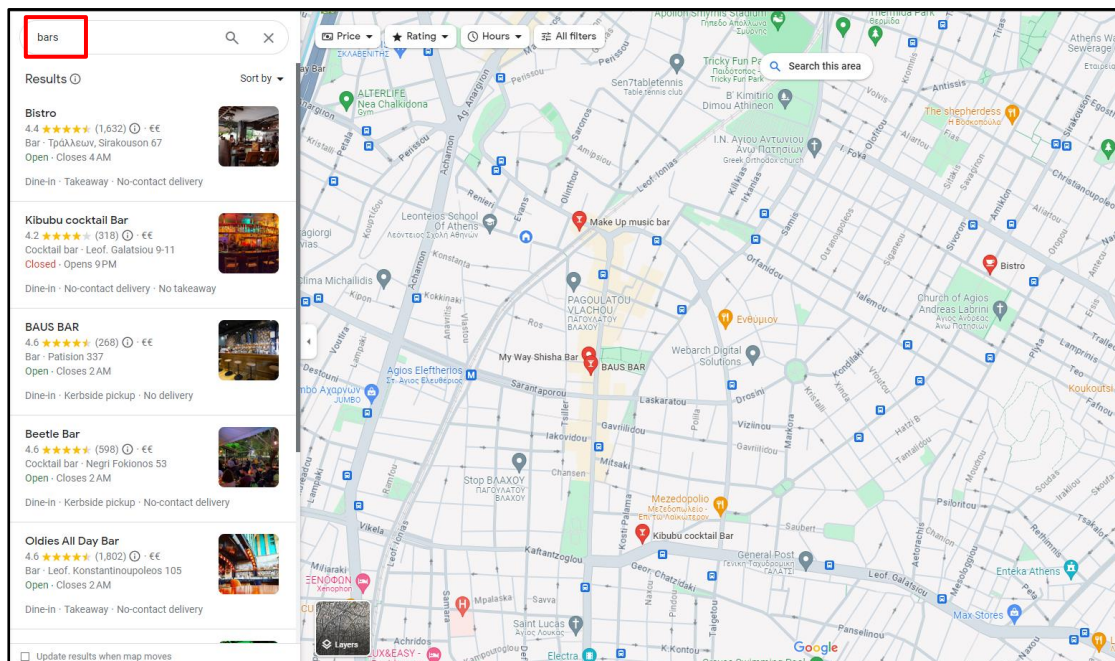


Running the tool, the points that match the criteria are downloaded and added into the project. Upon download, the Places layer is attributed with the name, place_id and type of the features.

**DISCLAIMER:** The algorithm is essentially an implementation of searching for a specific Place type through the Google Maps UI. It is not guaranteed that it will catch all the relative Places found in the radius.



The next step, if the user desires, is to attribute the downloaded Places. This algorithm uses the "Place detail" method of Google Maps Platform. To run the tool, use as input the Places layer produced by the previous step, the desired attributes (currently available: price_level, rating, user_reviews_total), and the API key.

| | type | name | place_id | price_level | rating | user_ratings_total |
|---|------|------|----------|-------------|--------|--------------------|
| 4 | church | Ekklisia Evaggel... | ChIJ2aLMt0W9... | NULL | 4.9 | 9 |
| 5 | church | Church of Prop... | ChIJjxWNN2m9... | NULL | 4.7 | 415 |
| 6 | bar | Kýrios | ChIJ25jD-IO9oR... | 2 | 4.3 | 933 |
| 7 | bar | Cocktails and D... | ChIJEe43WUe9... | NULL | 4.8 | 6 |
| 8 | bar | M8 | ChIJrR7ZX0e9o... | 2 | 4.6 | 382 |
| 9 | supermarket | My market | ChIJdzLIM86ioR... | NULL | 4.2 | 343 |

## Contact – Contribution

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https://github.com/kowalski93/Google-Maps-Places-Plugin-for-QGIS

Buy me a coffee: