

Social Media Data Representation:

Overview: To enable the web application to parse the social media public reviews into the application database global schema, an interpretation of the representation of the public review data is required. In this example of http request response from Google place API search (<https://developers.google.com/places/documentation/details#PlaceDetailsResponses>), there are 3 main attributes: html_attributes, result, and status (A,B in Fig 1, C in Fig 3). The result attribute consists of categories of data, which may also have subcategories, to be harvested.(See Fig 1, 2 & 3 for detail)

Data Representation: Data entry is required to indicate how the response data are to be represented in the database. From this Google place search example, Table-1 (Database – Public posting data relationship) shows how the data element equivalent in the database. Response data will not be stored for any attribute which does not have an equivalent representation.

Table-1 : Database - Public posting data relationship Example.

Database attributes	Social media data element equivalent representation
Posting Commentor ID	
Posting Commentor Name	result.reviews.author_name
Commentor TimeZone	
Posting TimeZone	
Commentor Language	result.reviews.language
Total Posting Reviews	
Overall Rating	result.rating
Rating By Commentor	result.reviews.rating
Review Comment	result.reviews.text
Review posted at:	result.reviews.time
Commentor Location	

```
{
  "html_attributions" : [],
  "result" : {
    "address_components" : [
      {
        "long_name" : "48",
        "short_name" : "48",
        "types" : [ "street_number" ]
      },
      {
        "long_name" : "Pirrama Road",
        "short_name" : "Pirrama Road",
        "types" : [ "route" ]
      },
      {
        "long_name" : "Pyrmont",
        "short_name" : "Pyrmont",
        "types" : [ "locality", "political" ]
      },
      {
        "long_name" : "NSW",
        "short_name" : "NSW",
        "types" : [ "administrative_area_level_1", "political" ]
      },
      {
        "long_name" : "AU",
        "short_name" : "AU",
        "types" : [ "country", "political" ]
      },
      {
        "long_name" : "2009",
        "short_name" : "2009",
        "types" : [ "postal_code" ]
      }
    ]
  }
},
]
```

There are 3 attributes for this response:

- A. `html_attributions`
- B. `result`
- C. `Status`

There are **15 categories** under the `result` attribute. There may be arrays of subcategories under each category:

1. **`address_components`**
[`long_name`, `short_name`, `type`]

Fig 2: Google Place Detailed Search Response Sample – Part 2

```
"events" : [
  {
    "event_id" : "9lJ_jKlGfhX",
    "start_time" : 1293865200,
    "summary" : "<p>A visit from author John Doe, who will read from his latest book.</p>
    <p>A limited number of signed copies will be available.</p>",
    "url" : "http://www.example.com/john_doe_visit.html"
  }
],
"formatted_address" : "48 Pirrama Road, Pyrmont NSW, Australia",
"formatted_phone_number" : "(02) 9374 4000",
"geometry" : {
  "location" : {
    "lat" : -33.8669710,
    "lng" : 151.1958750
  }
},
"icon" : "http://maps.gstatic.com/mapfiles/place_api/icons/generic_business-71.png",
"id" : "4f89212bf76dde31f092cfc14d7506555d85b5c7",
"international_phone_number" : "+61 2 9374 4000",
"name" : "Google Sydney",
"place_id" : "ChIJN1t_tDeuEmsRUsoyG83frY4",
"scope" : "GOOGLE",
"alt_ids" : [
  {
    "place_id" : "D9iJyWEHuEmuEmsRm9hTkapTCrk",
    "scope" : "APP"
  }
],
"rating" : 4.70,
"reference" : "CnRsAAAA98C4wD-VFvzGq-KHVEFhlHuy1TD1W6UYZw7KjuvfVsKMRZkbCVBVDxXFOOCM108n9P
```

2. **events**[[event_id, start_time, summary, url]]

3. **formatted_address**

4. **formatted_phone_number**

5. **geometry** [location[lat, lng]]

6. **icon**

7. **id**

8. **international_phone_number**

9. **name**

10. **place_id**

11. **scope**

12. **alt_ids** [place_id, scope]

13. **rating**

14. **reference**

Fig 3: Google Place Detailed Search Response Sample – Part 3

```
"reviews" : [
  {
    "aspects" : [
      {
        "rating" : 3,
        "type" : "quality"
      }
    ],
    "author_name" : "Simon Bengtsson",
    "author_url" : "https://plus.google.com/104675092557960962573",
    "language" : "en",
    "rating" : 3,
    "text" : "Just went inside to have a look at Google. Amazing.",
    "time" : 1335440352569
  },
  {
    "aspects" : [
      {
        "rating" : 3,
        "type" : "quality"
      }
    ],
    "author_name" : "Felix Rauch Valenti",
    "author_url" : "https://plus.google.com/103291336674373259537",
    "language" : "en",
    "rating" : 3,
    "text" : "Best place to work :-)",
    "time" : 1335411244323
  },
  {
    "aspects" : [
      {
        "rating" : 3,
        "type" : "quality"
      }
    ],
    "author_name" : "Chris",
    "language" : "en",
    "rating" : 3,
    "text" : "Great place to work, always lots of free food!",
    "time" : 1330467039039
  }
],
"types" : [ "establishment" ],
"url" : "http://maps.google.com/maps/place?cid=102511193986374313354",
"vicinity" : "45 Pirrama Road, Pyrmont",
"website" : "http://www.google.com.au/"
},
"status" : "OK"
```

15. **reviews** [**aspects** [**rating**, **type**],
author_name, **author_url**, **language**,
rating, **text**, **time**]