

```

1 def Marker(Segments, radius = 100):
2     # OSM Marker
3     global connection
4     connection = ConnectionHandler() # handles Python <-> PostgreSQL DB
5
6     for Segment in Segments:
7         MarkSegment(Segment, radius)
8     return Segments
9
10 def MarkSegment(Segment, radius):
11     for (i, distinct_location) in Segment.DistinctLocations:
12         nearby_vector = connection.query_location(distinct_location, radius)
13         Segment.mark_with_vector(nearby_vector, i)
14
15 class ConnectionHandler:
16 def query_location(self, location, radius):
17     sql_command = self.sql_cmd_radius(location, radius)
18     # builds the query
19     # SELECT <interesting_columns> FROM table WHERE distance < radius
20
21     rows, column_names = self.run_command( sql_command )
22
23     pairs = extract_all_pairs(rows, column_names)
24     # returns pairs of column names and their values
25     # for example "highway=primary", ...
26
27     nearby_vector = [0] * number_of_observed_pairs
28
29     for pair in pairs
30         if pair in observed_pairs:
31             index = indice_dictionary[pair]
32             nearby_vector[ index ] += 1
33     return nearby_vector

```