

Creating Heatmaps

QGIS Tutorials and Tips



Author

Ujaval Gandhi

<http://google.com/+UjavalGandhi>

Translations by

SongHyun Choi



What are the two main types of spatial analysis? *cluster analysis* and *hotspot analysis*.



What is the name of the 2011 census data for Surrey?

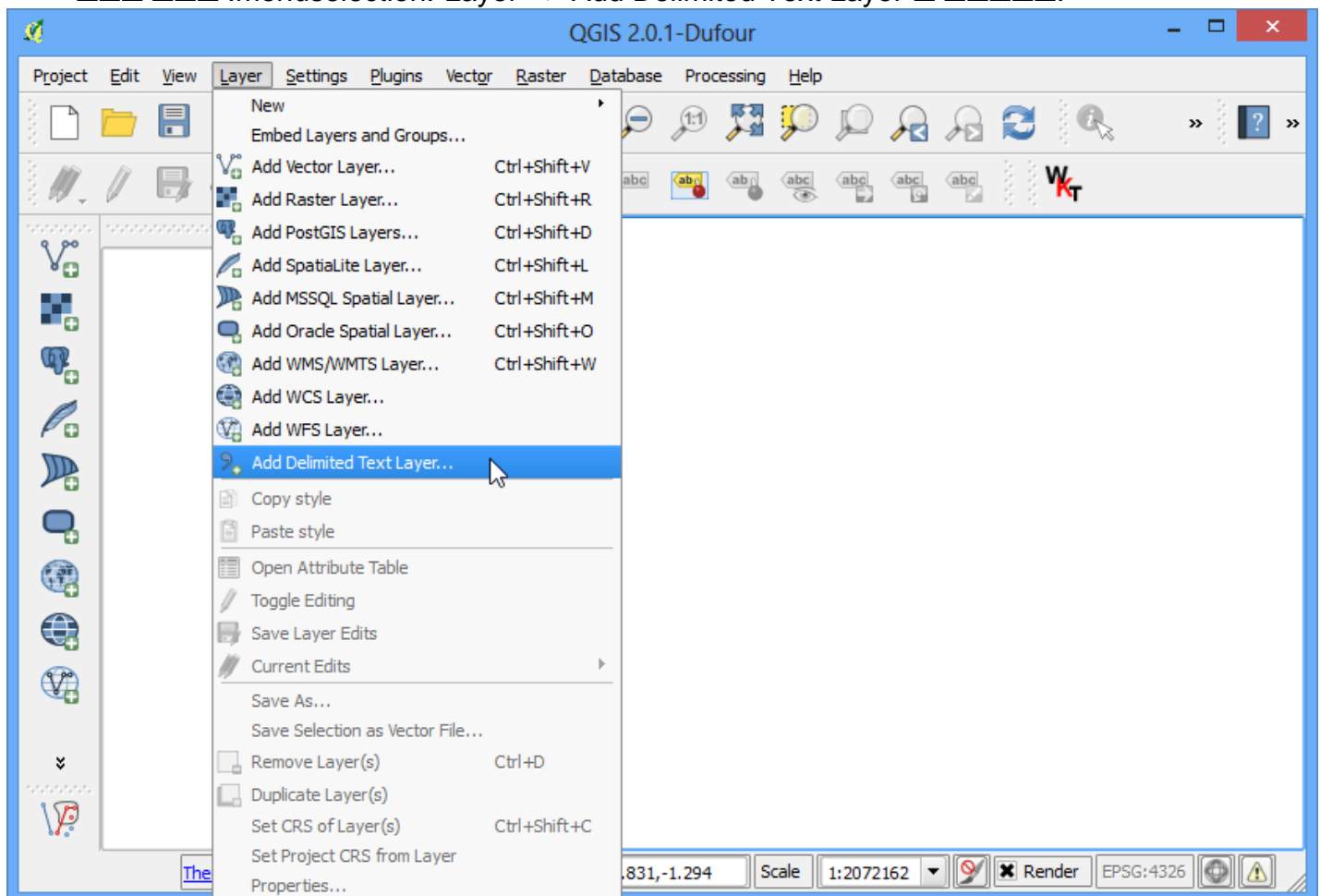


Where can you find raw data from the Police.uk crime mapping website <<http://data.london.gov.uk/datastore/package/policeuk-crime-data>>?

Download the Surrey data.



- What are the steps to import a CSV file into QGIS? (Menu: Layer --> Add Delimited Text Layer)



2. `police-uk-crime-data-surrey.txt` `CSV (comma separated values)` `*Easting*` `*Northing*` `X` `Y` `Use spatial index` `OK`.

File Name: `C:/Users/ujaval/Downloads/police-uk-crime-data-surrey/police-uk-crime-data-surrey.txt` Browse...

Layer name: `police-uk-crime-data-surrey` Encoding: `UTF-8`

File format: ☒ `CSV (comma separated values)` ☐ Custom delimiters ☐ Regular expression delimiter

Record options: Number of header lines to discard: `0` ☒ First record has field names

Field options: ☐ Trim fields ☐ Discard empty fields ☐ Decimal separator is comma

Geometry definition: ☒ Point coordinates ☐ Well known text (WKT) ☐ No geometry (attribute only table)

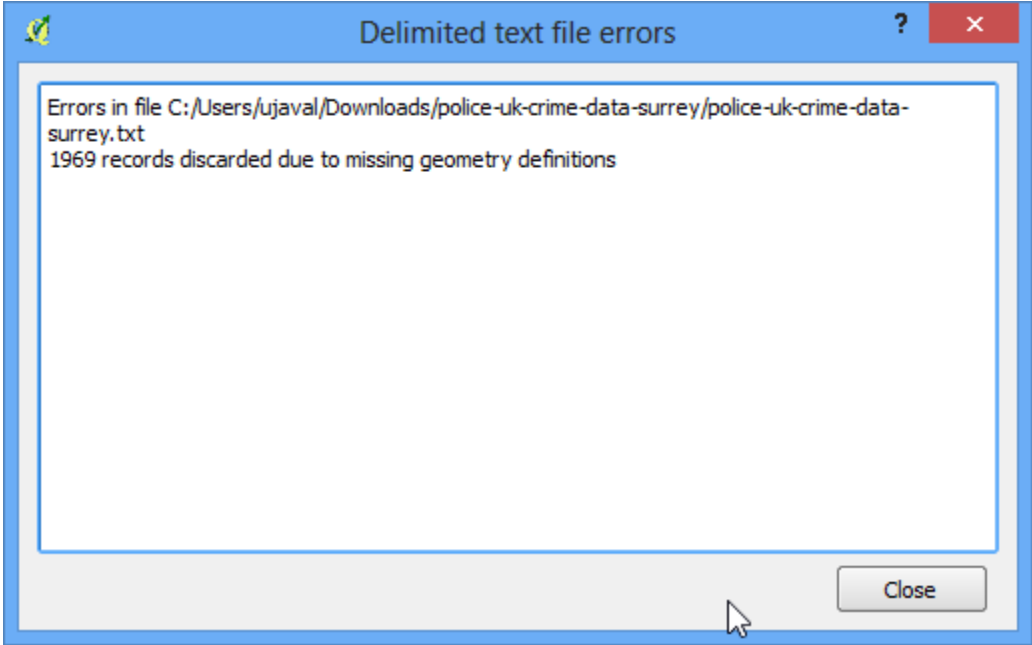
X field: `Easting` Y field: `Northing` ☐ DMS coordinates

Layer settings: ☒ Use spatial index ☐ Use subset index ☐ Watch file

	ID	Month	Reported by	Falls within	Easting	Northing	Location	Crime type	Conte:
1	480097	2010-12	Surrey Police	Surrey Police	532773.00	156680.00	On or near Addison Road	Burglary	
2	480098	2010-12	Surrey Police	Surrey Police	498361.00	149806.00	On or near The Oval	Burglary	
3	480099	2010-12	Surrey Police	Surrey Police	498205.00	165251.00	On or near Albury Close	Burglary	
4	480100	2010-12	Surrey Police	Surrey Police	507437.00	174069.00	On or near Sanctuary Road	Burglary	
5	480101	2010-12	Surrey Police	Surrey Police	498205.00	165251.00	On or near Albury Close	Burglary	

OK Cancel Help

3. `Close`.



4. , `Coordinate Reference System (CRS)` .
 British National Grid . CRS :guilabel:`OSGB 1936 / British
National Grid` . :guilabel:`OK` .



7. ■■■■■ ■■■■ ■■■■ `Heatmap`■■■■ ■■■ ■■■■■■ ■■■■■■. ■■■■ ■■■■■■ ■■■■■■■■ ■■■■
:doc:`using_plugins`■ ■■■■■. ■■■ ■■■■■■ ■■■■■■■■ ■■ ■■■■ --> ■■■■■ --> ■■■■■
:menuselection:`Raster --> Heatmap --> Heatmap`■ ■■■■■.



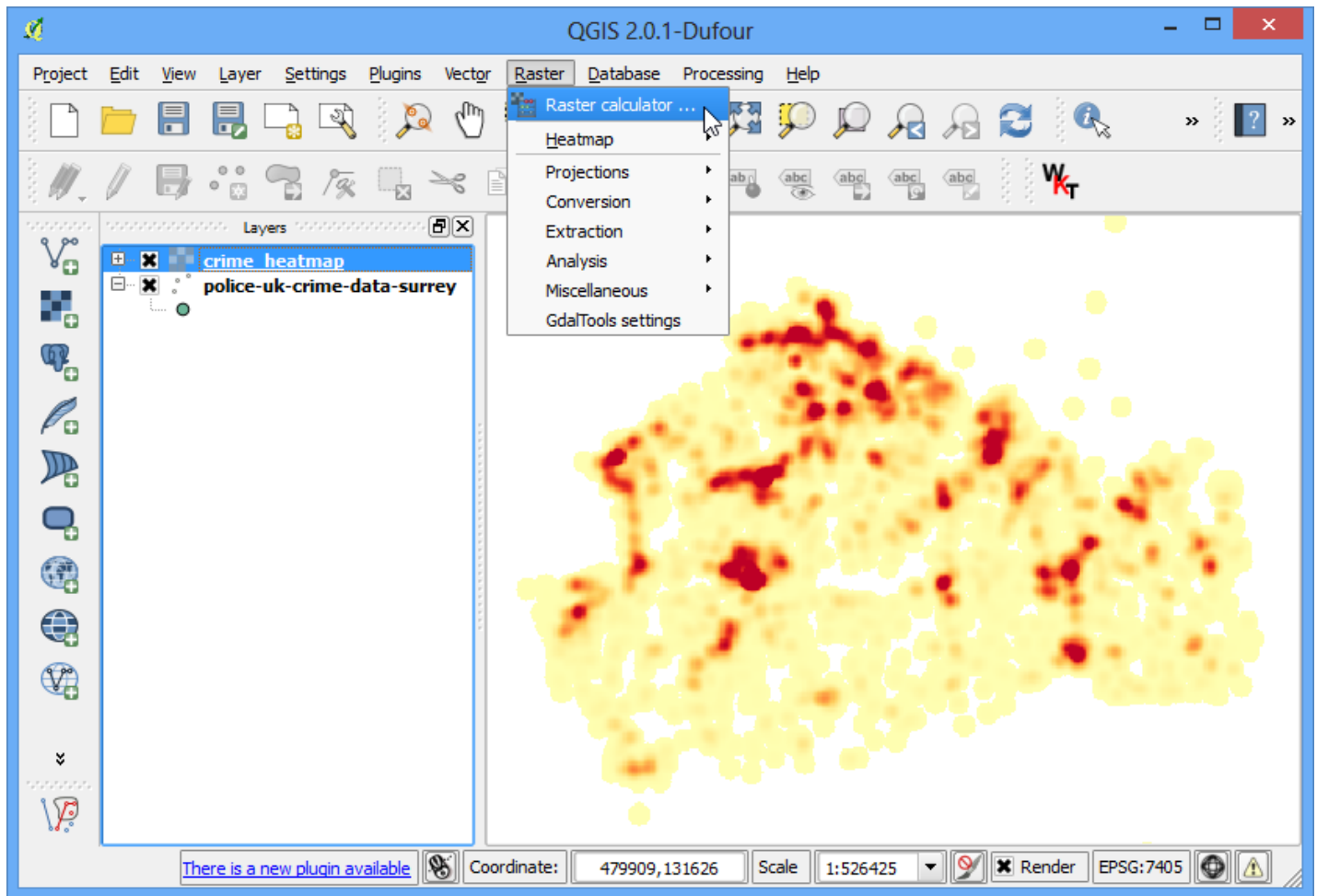
8. `Heatmap Plugin` `Output raster` `sms` `crime_heatmap`. `Radius` `1000`. `heat` `Advanced` `Cell Size X` `Cell Size Y` `100`. `OK`.



10. `guiabel: Properties``



11. `Style` `:guilabel:Render type` `:guilabel:Singleband pseudocolor` `:guilabel:Load min/max values` `:guilabel:Accuracy` `:guilabel:Actual (slower)` `:guilabel:Load` `:guilabel:Generate new color map` `:guilabel:YlOrRd (Yellow-Orange-Red)` `:guilabel:Classify` `:guilabel:OK`



14. `processing:Raster calculator` `crime_hotspots` `crime_heatmap@1` `"crime_heatmap@1" > 5` `Add result to project` `OK`



15. QGIS ■■■■ ■■■■ ■■■■ ■■■■. ■■■■ ■■■■ 0 ■■ 1 ■■ ■■■■. ■■■■ 5 ■■ ■■■■ ■■■■ 1 ■■ ■■ ■■■■ 0 ■■■■. ■■ ■■■■ --> ■■ --> ■■■■ /■■■■ ■■■■ :menuselection: `Raster --> Conversion --> Polygonize (Raster to Vector)` ■■■■.



16. `crime_hotspots_vector` `:guilabel:Field name` `:guilabel:Load into canvas when finished` `:guilabel:OK`



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- The screenshot shows the QGIS 2.0.1-Dufour interface. The 'Layers' panel on the left lists three layers: 'crime_hotspots_vector' (selected), 'crime_heatmap', and 'police-uk-crime-data-su'. A right-click context menu is open over the 'crime_hotspots_vector' layer, with the 'Open Attribute Table' option highlighted. The map canvas displays a purple-shaded area representing crime hotspots. The status bar at the bottom shows the coordinate 483057,159430 and scale 1:590450.



19. `DN = 1` `Select` `Close`



20. QGIS **Save Selection As...** dialog box. The **Save Selection As...** dialog box is used to save the selected features as a new layer. The dialog box has several options, including the ability to save the selection as a shapefile, a geodatabase, or a memory layer. The **Save Selection As...** dialog box is located in the **Processing** menu.



21. `crime_clusters` :guilabel: `Add saved file to map` :guilabel: `OK`



22. ■■■■■■■■. ■■ ■■■■ ■■■■■■ ■■■■ `hotspots` ■■■■ ■■■■. ■ ■■■■■■ ■■■■■■
 ■■■■ *intelligence* ■■■■ ■■■■ ■■■■ ■■■■ ■■■■ ■■■■ ■■■■ ■■■■ ■■■■ ■■■■ ■■■■.

