python plugins

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outline

python plugins

MMQGIS

basic statistics: Statist

google goodies: open layers

geoSearch

customizing

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python-what's that?

◇ python is a great (productive, user-friendly) programming language

◇ a great thing is that python is widely used in GIS

◇ and you can automate with it (qgis, ArcGis, etc)

◇ perhaps one day if there is enough demand

◇ i could teach advanced gis, when we could cover this

◇ but we can get considerable power by just using plugins

◇ plugins are little programs available for download

· and they enable new tools in qgis

python plugins

◇ qgis producers and other people wrote little programs in python

◇ anybody can write a plugin for qgis

◇ they are extremely useful

◇ in fact, it's plugins that make qgis a great piece of software

◇ qgis with plugins can compete with pricey industry standard, ArcGIS

get the plugins

◇ plugins-manage and install plugins

· you can enable there lots of stuff–scroll down, there's some self-explanatory options

◇ experiment at home! many great tools there

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the power

◇ arguably the most useful and comprehensive plugin of all

◇ we will use it a lot in this class; especially:

· MMQGIS-Combine-Attributes Join from CSV layer

· MMQGIS-Combine-Geocode CSV with Google / OpenStreetMap

table manager

◇ great for renaming vars

· again qgis likes short

◇ http://gis.stackexchange.com/questions/75563/

  how-to-rename-attributes-fields-in-a-shapefile-attribute

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especially useful for older qgis < 2.10

◇ often some useful tool is innovated with a plugin

◇ and then becomes a standard in software

◇ in newest qgis > 2.10 you have histogram capability

· layer-properties-style, and there is a tab with "histogram"

◇ but in any qgis you can get a neat histogram through Statist plugin

◇ plugins-manage, install plugins, search "Statist"

◇ once installed should appear at the bottom of left toolbar

◇ and its icon is a $\sum$

using it

◇ pick popden2010 from nj_counties

◇ very useful information when thinking of a color ramp!

◇ you should have histograms in your ps for key variables

· and discuss distribution

· just click the "diskette" icon to "save as"

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bringing google maps into qgis

◇ http://maps.cga.harvard.edu/qgis/wkshop/basemap.php

◇ especially if you map at low level (neighborhood, city, county)

· you want some background (roads, parks etc)
  (e.g. as shown in google maps)

◇ you could do it step-by-step

· find roads layer, parks layer, etc

· lots of work !

◇ you can very easily bring all of that into qgis right from google maps

◇ just need an openlayers plugin

openlayers plugin

⋄ let's get that useful google imaginary

· search: "openlayers" and install it

⋄ then just web-openlayers plugin-add google streets layer
  (if google streets doesn't work, try others)

· and it appears on the left under layers

⋄ move it as the last layer so that it does not cover your map

⋄ again it's especially useful if you work at low level

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cool features

◇ (first loead openlayers so that can see where we are)

◇ can easily have multiple nodes for the trip

◇ can do all modes that google can do: walk, drive, bike etc

◇ say pick last tab 'Route' and enter in first line

◇ 'camden nj' and in second: 'philly pa' and hit ok

◇ it will show the route along with distances

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toolbars

$\diamond$ one way to customize is to instal py plugins

$\diamond$ but you can also customize the presence and placement of the core tools

$\diamond$ you'll use qgis a lot–make it comfortable

$\diamond$ can customize what is displayed–right click at the top (below MENU)

$\diamond$ and select the stuff you want to have displayed

$\diamond$ can grab a toolbar (left side) and move around