python plugins

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outline

python plugins

MMQGIS

basic statistics: Statist

google goodies: open layers

geoSearch

workflow/saving and customizing

outline

python plugins

python-what's that?

◇Py: great (productive, user-friendly) programming lang

◇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

◇ users like you 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

$\diamond$ plugins-manage and install plugins

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

$\diamond$ experiment at home! many great tools there

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the power

$\diamond$ arguably the most useful and comprehensive plugin of all

$\diamond$ 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

$\diamond$ often some useful tool is innovated with a plugin

$\diamond$ and then becomes a standard in software

$\diamond$ in newest qgis > 2.10 you have histogram capability

$\cdot$ layer-properties-style, and there is a tab with "histogram"

$\diamond$ but in any qgis you can get a neat histogram through Statist plugin

$\diamond$ plugins-manage, install plugins, search "Statist"

$\diamond$ once installed should appear at the bottom of left toolbar

$\diamond$ and its icon is a $\sum$

using it

◇ NJ counties (same as alaways) `https://docs.google.com/uc?id=1xJDhcRCkgv7k4tNCa72Oog5bohV6dTB2&export=download`

◇ 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

◇ esp if you map at low level (neighb, city, county)

· you want some background (roads, parks etc)
  (eg 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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workflow

◇ save the whole project (with many layers) and next time just open it

· (again, dont rename, move shapefiles around–it'd break things)

◇ can move layer up/down in layer window

· and can turn it on and off

◇ can have many layers with say different symbology of the same shapefile

◇ example–let's load nj_counties and produce several different symbologies and save whole project...and open it

customizing

◇ one way to customize is to instal py plugins

◇ but you can also customize the presence and placement of
  the core tools

◇ you'll use qgis a lot–make it comfortable

◇ can customize what is displayed–right click at the top
  (below MENU)

◇ and select the stuff you want to have displayed

◇ can grab a toolbar (left side) and move around

misbehaving software

◇ most of the software sometimes misbehaves...

· it does silly things, refuses to do something, crashes, etc

◇ troubleshooting:

· email me

· do what you are doing in a different way-e.g try different dataset; different var; different approach etc (usually can do same thing in many ways)

· shut it down and fire it up again

· reinstall