GEODA

Geodata is a GSI software used as an introductory tool for induction of beginners into working with Spatial data analysis. GeoDa mainly deals with geostatistics and is even used by top academic institutions such as MIT, Harvard and Cornell to further their researches and findings.

He user can utilize GeoDa to perform tasks such as descriptive, Autocorrelation along with regression statistics. Due to it’s working characteristics it is used as an introductory tool for non-GSI users. This tool showcased promising results in various sectors such as health care, real estate , economic development etc.

GRASS GIS

Developed to be utilised as a defence software for the US Army Corps of Engineers , code named GRASS GIS which stands for Geographic Resources Analysis Support System. This tool was designed and utilised for environmental planning and land management. As of today the tool is utilised for different areas of study as a free GSI software.

The tool is utilised by environment consultants, different academia and government bodies due to its high reliability and a very intuitive GUI, as the software provides 350 rock solid vector and raster manipulation tool for data processing. The software is best valued for its utilisation in sectors concerning analysis, digital terrain manipulation, image processing and stastics.

ILWIS

Once a commercial software but later converted into an open source software for wide and easy access for users ILWIS stands for Integrated Land and Water Information Management. Some of the basic areas of operation for this software are editing, digitization and displaying geographic data. Further the software also facilitates remote sensing with tools for image enhancement, classification and band manipulation. Some of the users for this software are planners, water managers, biologists and by people and institutions utilising geospatial data.

MapWindows

The software is not a complete software for utilisation in the Geo spatial data processing but caters to the needs of its users by performing around 90% of the intended tasks such as identity features, map viewer, processing tools and print layout. It also relives the user from the dependence over commercial GSI software. There is also an integrated unique feature for automatic watershed delineation termed as TauDEM. This software is a free to use software but in the past it has shown instability in terms of software processing integrity.

QGIS

It is counted as one of the best mapping tools or software with several added features available for free in the market. The user can utilise this tool for automated map production, generating cartographic figures and to process geospatial data.

This is counted as one of the best software due to its characteristics that fullfills the role of an all in one community tools accompanied with plugins such as from QGIS community developed to cater user needs. Also the software can integrate QGIS Stack Exchange for support work and data processing.

gVSIG

Counted as the best 3D visualisations tool available as an open GSI platform and was introduced in the year 2004. There are several beneficial characteristics of this software such as NavTable, which makes data management easy because of the one by one vertical record viewing agility. Also tools such as OpenCAD help in tracing geometries , edit vertices, split and snap polygons and lines. These features are facilitated as they are tailor made for field work due to the software interface and GPS tool option present to the user.

SAGA GIS

Originally designed for analysis of terrain such as watershed extraction, hill shading and visibility analysis. The tools facilitates operations with multiple windows to lay forward all the analysis such as map, scattered plots, histograms etc besides providing a methods related to geosciences to the geoscientific community.

Several unique and robust morphometric tools are assembled using the tool, which also includes the SAGA topographic wetness index and also the topographic position classification. Being swift , accurate and reliable are the major attributes of this software.

uDig

uDig is an efficient open GIS software for which acts as a basic mapping tool. The map allows for import of base maps. The software is known for its user friendly interface due to its ease of usage. Some of the robust traits of this tool are catalogue, symbology and its functionality with Mac OS. The name of the software itself is the abbreviation of the features of the tool, as u stands for the ease of access interface, D represents the varieties of Operating systems such as Windows, Mac and Linux, I stands for Internet oriented consuming standards such as WMS, WFS or WPS, G represent the complex analytical capabilities of GIS.