



Interactive Web-based GIS Tutor

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Abstract

Geographic Information System is a computer-based tool that analyses, stores, manipulates and visualizes geographic information. Geoinformation industry has seen in the last few years a huge boom. GIS has its importance in a number of applications viz. Mapping, Planning, Environment, Hazard, Agriculture, Weather forecast, Land use/Land cover changes etc. Although there is a lot of material available both online and offline to learn about GIS but there is a lack of online interactive platforms available to do so. This work aims to contribute to a part of basic GIS education by providing an interactive Web application for learners. As the application is web based it is easily accessible from any web browser hence it will serve as a cross platform tool. This application will provide the text material through web pages, to the learner for understanding of the fundamental concepts of GIS. It will also provide the option for interactive spatial data (points, polylines and polygons) creation for doing hands on exercises. The user will be able to create the test data for the area of his interest as GoogleEarth layer will be available as backdrop for digitization. The user will be able to perform various geospatial functions like Buffer, Clip, Intersection etc on the data created by him/her. This interactive functionality feature along with the explanation through text will not only make the things easier but will also encourage the learner to learn GIS. To develop this web application Open source tools and libraries like OpenLayers and GeoServer have been used. Thus this application will help the learner to understand the basic concepts of GIS theoretically and practically. This in turn is an example of how open source WebGIS can help in learning GIS.

Keywords: *Geoserver, Geospatial, Interactive GIS tutorial, Openlayers, Open source, WebGIS*

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