ArcGIS: Importance for Engineers

ArcGIS is an extensive and integrated software developed by ESRI to work with map and geographic information. It is used for creating and using maps, compiling geographic data, analyzing mapped information, sharing and discovering geographic information, using maps, and geographic information in a range of applications, and managing geographic information in a database. ArcGIS comprises four key software parts: a geographic information model for modeling aspects of the real world; components for storing and managing geographic information in files and databases; a set of out-of-the-box applications for creating, editing, manipulating, mapping, analyzing and disseminating geographic information; and a collection of web services that provide content and capabilities (data and functions) to networked software clients. It can be used in mobile, laptop, desktop, and servers. It was released initially on December 27, 1999.

Applications

It is applicable for many engineers like Civil, Geomatics, Environmental, Petroleum, Agricultural, Mechanical, Biomedical, and many more.

1. GIS tools and techniques lead to understanding cross-disciplinary phenomena and solving problems rooted in academic and real-world concepts.
2. It is applicable for Crop Production Estimation and helping farmers to grow crops.
3. It is helping Civil engineers for looking DEM for hydro modeling which was difficult from AutoCAD.
4. It is helping Geomatics engineers for land use planning and making maps of society and country.
5. It is applicable for weather and rain forecasting and helping for living.
6. GIS is a useful tool that can be utilized in the search for appropriate new landfill sites.
7. Environmental engineers find it's use in urban development and town planning as it helps for demographics, natural resources, and socio-economic statistics.
8. GIS manages and organizes geographic information to support efficient and fast visualization and logical applications, no matter the amount of data held in an organization.
9. It is used by petroleum engineers to map the site and amount of leakage in that area over different times.
10. It is used in airports and aerospace engineering for rescue missions.

References

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