

## Development of Open Source Geospatial Certification Model Based on Geospatial Technology Competency Model

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**Abstract :** Open source geospatial certifications are needed in geospatial technology education and industry sector. In parallel with proprietary software, free and open source software solutions become important in geospatial technology research and play an important role for the growth of the geospatial industry. ESRI, GISCI (GIS Certification Institute), ASPRS (American Society of Photogrammetry and remote sensing), and Meta spatial are offering certifications on proprietary and open source software. These are portfolio and competency based certifications depending on GIS Body of Knowledge (Bok). The analysis of these certification approaches might lead to the discovery of some gaps in them and will open a new way to develop certifications related to the geospatial open source (OS). This new certification will investigate the different geospatial competencies according to open source tools that help to identify geospatial professionals and strengthen the geospatial academic content. The goal of this research is to introduce a geospatial certification model based on geospatial technology competency model (GTCM). The developed certification will not only incorporate the importance of geospatial education and production of the geospatial competency-based workforce in universities and companies (private or public) as well as describe open source solutions with tools and technology. Job analysis, market analysis, survey analysis of this certification opens a new horizon for business as well.

**Keywords :** geospatial certification, open source, geospatial technology competency model, geoscience

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