

Alternative Job Titles

GIS Technician, GIS Specialist, Land Survey Technician, Cartographic Technician, Survey CAD Technician

Job Description

GIS analysts use geographic information system technology to identify assets, variables, and trends in different locations. Their work involves collaborating with computer-aided design (CAD) technicians, developing web apps and tools, and integrating GIS with other technologies. GIS analysts usually work regular business hours, with occasional weekend work necessary to meet important deadlines. Some amount of travel may be required for field work. Typically more for entry-level employees, this position often does not require significant research experience, ability to do advanced programming, or higher education. The GIS analyst position is well suited to analytical thinkers who enjoy statistics and numerical data, have good communication skills, and work well as part of a team. Other duties typically include:

- Convert paper maps into GIS data sets that can be used to identify where locations have been developed.
- Manipulate and analyze geographical information to be presented in reports or presentations.
- Maintain a geographical library in accordance with the latest trends and newest information.
- Develop internet apps and tools to present GIS data on corporate websites for clients.
- Study mathematical styles used in successful GIS plans, programs, and commodities, so that they can be applied or improved upon in other applications.

Knowledge Requirements

- Earth Geometry & Geodesy
- Geospatial Systems & Technologies
- Analysis, Research & Reporting Methods
- Statistical Theory & Methods
- GIS, GPS, Other Measurement Systems
- Remote Sensing & Photogrammetry
- Mathematics & Number Systems
- Cartography, ArcGIS Map Design
- Understanding of GIS, GPS, LIS
- Asset & Database Management
- Spatial Modeling & Analysis
- Surveying, Data Collection
- Project Management Practices

Required Skills & Abilities

- Prepare Reports & Presentations
- Plan & Coordinate Projects
- Public Speaking & Interaction
- Foster/Support Teamwork
- Written & Oral Presentation
- Work Independently
- Problem Solving
- Critical/Analytical Thinking
- Collect, Compile & Analyze Data
- Develop & Document Procedures
- Assess Visual Information
- Perform Data Research

Technical Skills Requirements

- Esri ArcGIS, 3D/Network/Spatial Analyst
- AutoCAD, QGIS, GRASS, PCI, MS Office
- Python, SQL, C++, Visual Basic, Java

Typical Salary

- \$30,435 - \$52,276, entry-level
(Source: PayScale)

Education & Work Experience

- Bachelor's or master's degree in geography, computer science, engineering, or a related field.
- Prior GIS applications knowledge with 2 years work experience are preferred in this job market.
- A GIS Professional (GISP) designation is advantageous (offered by the GIS Certification Institute).