



GIS PROGRAMMER/ENGINEER 2

Department: Finance
Job Class #: 632000
Pay Range: Professional 16

FLSA: Exempt
Represented: No

Classification descriptions are intended to present a descriptive list of the range of duties performed by employees in this class and are not intended to reflect all duties performed within the job.

GENERAL FUNCTION:

This is senior-level professional, technical, analytical, and customer-oriented work in the GIS Division of the Information Technology Division of Finance. An employee in this classification provides technical services and expertise to IT GIS clients for the use of enterprise GIS technologies. The GIS Programmer/Engineer 2 may include any or all of the essential functions listed below.

SERIES CONCEPT: This is the senior-level in the series. This classification is distinguished from other GIS Programmer/Engineer levels by the scope of work, level of supervision, and direction required to perform job functions.

ESSENTIAL FUNCTIONS:

- Perform senior-level professional technical services in GIS data construction, programming, database management, GIS analysis, system implementation and project management. Assist senior GIS staff on large scale or complex projects.
- Responsible for project management for data and application development projects:
 - data management- geodatabase design, workflow development, metadata development and data automation; and
 - application management: needs assessment, application design, development, implementation, documentation, and customer support and creation and maintenance of procedural documentation and training for department and user department staff.
- Program, maintain, enhance, and support GIS business systems/programs.

Business Analysis

- Work with business customers in translating customer requirements into formal contracts/agreements and plans.
- Collaborate on the identification of business and functional requirements. Complete system analysis to streamline and enable efficient use of GIS software and processing.
- Extend new or existing business systems through the integration of GIS functionality and data.
- Configure new system software and integrate existing business systems with GIS.
- Perform advanced spatial, geo-statistical, network, 3D, or business analysis of data themes.

Data Construction and Management

- Provide data administration assistance for multi-use corporate and department specific GIS data sets across multiple hardware platforms and operating systems.
- Develop and implement data set publication and maintenance procedures.
- Coordinate data development and access with department users, system, operation, and technical support staff. Protect the safety, integrity, and privacy of data.
- Configure and administer database environment to ensure production operating capacity and efficiency.
- Plan and coordinate security measures with developers to safeguard information in systems against accidental or unauthorized damage, modification or disclosure.

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Software Development

- Plan, design, develop, test and monitor GIS programs and systems.
- Program new system software and integrate existing business systems with GIS.
- Configure, maintain, enhance, and support GIS business systems/programs.
- Expand or modify a GIS system to serve new purposes or improve a workflow. Implement business systems or spatial analysis projects to solve technical problems or implement a business process.
- Use object-oriented programming languages and web services as well as client and server applications development processes and internet technologies to construct new GIS software systems.
- Determine computer software or hardware needed to setup or alter a system.
- Administer and support 3rd party software packages that utilize GIS technology.
- Perform advanced and complex GIS spatial data analysis (density, spatial statistical) spatial analysis of data themes that provides quantitative and qualitative results to a problem.

System Support

- Support mission critical GIS systems in the Emergency Operations Center during emergencies and activations.
- Support roll-outs of new software systems and solve GIS technology problems proactively.
- Independently solve and troubleshoot software malfunctions involving software, hardware, and networking.
- Deliver excellent customer service, by measuring and creating customer satisfaction, and enhance customer's relationships with the Information Technology Division.
- Maintain up-to-date GIS knowledge and build expertise among colleagues in the Information Technology Division.

Implementation Services

- Create the scope, cost, work plans, performance and contractual deliverables through the application of planning, tracking, quality assurances, change control, and risk management.
- Manage client relationships and expectations.
- Implement business systems or spatial analysis projects and solve technical problems or implement a business process.
- Address customer's information needs by developing technology solutions and supporting information and technology systems on multiple computing platforms.
- Market services, projects, and resources effectively.

Training

- Coordinate, train, instruct, and support county staff on the productive use of GIS software and databases.
- Prepare training documentation, help guides and scope of procedures.

Communication and Project Management

- Act as liaison between departments and IT to communicate any potential issues/questions and provide GIS solutions both to internal county departments and external subscribing agencies or contracted services.

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- Manage contracts, project performance, schedules, payments, deliverables, and support of GIS external and internal clients.
- Work in a teamwork based environment, communicating effectively with all levels of staff and management.
- Prepare and present industry conference presentations.
- Independently complete multi-agency GIS technical projects.

OTHER JOB FUNCTIONS

- Manage own schedule and workload.
- Manage time and resources.
- Prepare reports and delivers presentations.
- Perform administrative tasks and other job functions as required.

SUPERVISION RECEIVED AND EXERCISED:

The IT GIS Programmer/Engineer 2 does not supervise or lead but may direct work of others for project specific cases. An employee in this class works under the general supervision of an IT GIS Programmer/Engineer, Lead or Expert/Supervisor who observes work through assignments and projects to evaluate results achieved.

WORK ENVIRONMENT:

The work environment characteristics described herein are representative of those an employee encounters while performing the essential job functions. Work is performed in an office and field environment. Work may involve frequent sitting, standing, walking, bending, and lifting and carrying field gear, working in all weather conditions, and driving to and from job sites. Field data collection (GPS), lifting of catch basin lids and traveling to various departments may be included. Ability to work after normal County business hours, including weekends, for customer support, a scheduled function, or in an on-call capacity required.

PHYSICAL REQUIREMENTS:

The physical demands described herein are representative of those that must be met by an employee to successfully perform the essential functions. Physical activities required are hand and finger dexterity necessary to operate equipment used in the position, talking, seeing and hearing. Walking, sitting, bending/stooping, pushing/pulling, driving and unassisted lifting associated with the job duties is required.

KNOWLEDGE, SKILLS, AND ABILITIES

Knowledge of:

- GIS technologies, techniques and practices.
- Mapping systems, coordinates and spatial data accuracies.
- ESRI software products, operations, and structures.
- Internet and network skills, including HTML, XML/XSLT, HTTP, SSL, TCP/IP.
- UNIX, Windows or Linux environments.
- Training techniques.
- Understanding of current GIS information technologies and the County GIS system.

Skill in:

- Java skills and object oriented design, including working knowledge of core libraries, design patterns, JSP and servlets.
- Database design and SQL and open source database systems.

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- Significant development experience in a Unix/Linux environment.
- Experience with Python and C++, Javascript, and/or SOAP desired.
- Knowledge of session management, object relational mapping, XML web services, and agile development methodologies desired.
- Use of independent judgment and effective decision-making in the application of a wide variety of laws, policies and procedures and in effective problem-solving.
- Comprehensive project management.

Ability to:

- Integrate computing on multiple computing platforms.
- Define, track, and assure responsiveness to clients' information service problems.
- Contribute to analyzing and compiling results of decision issues in GIS.
- Research, verify, edit, and update data bases and GIS spatial data.
- Communicate effectively verbally and in writing to audiences of various social, cultural, ethnic, educational and economic backgrounds.
- Effectively coordinate, perform and complete multiple duties and assignments concurrently and in a timely manner.
- Maintain regular, predictable and punctual attendance during regularly scheduled work hours at assigned worksite.
- Work a flexible schedule, which may include evenings, weekends, and holidays. May be subject to responding to emergency situations on twenty-four hour basis.
- Establish and maintain effective working relationships.
- Work and contribute as a member in a teamwork-based environment.
- Meet the travel requirements of the position, if any.
- Physically perform the essential job functions of the classification.

MINIMUM REQUIREMENTS TO APPLY:

Bachelors Degree in Science, Technology, Engineering, Geography or related field and four or more years of information technology/GIS experience required. Additional education or experience may substitute for the recruiting requirements.

SPECIAL REQUIREMENTS AND/OR QUALIFICATIONS: A valid Washington State driver's license may be required when travel is required of the position. Ability to successfully complete a Pierce County background investigation. Fingerprint and in-depth criminal history check may be required for certain law enforcement system support assignments.