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FUGRO HORIZONS, INC.

3600 Jet Drive  
Rapid City, SD 57703-4730  
+1 605-343-0280  
+1 605-343-0305-fax

## Position Description

**Position Title**

Computer Programmer/GIS Analyst

**Status**

Full-time/Exempt

**Division/Department**

Engineering

**Security Clearance**

N/A

**Reports To**

Vice President of Engineering

**Date Issued**

January 21, 2010

## Position Summary

Fugro Horizons is seeking a highly skilled Programmer with GIS experience to work in developing; coordinating; implementing and administering a high level Enterprise Geographic Information System built largely on proprietary, in-house developed software. The GIS Analyst/Programmer provides direct, hands-on software development and process automation in support of the mapping operations. He/she understands the details of the mapping operations and can assist in maintaining the mapping infrastructure while maintaining a reasonable rate of production. Position requires extensive programming experience in C as the individual will be required to maintain and enhancement existing code written in C.

Established in 1968, Fugro Horizons, Inc. specializes in providing, end-to-end, leading edge photogrammetric and remote sensing services for environmental and engineering applications.

Fugro Horizons, Inc. is part of the Geospatial Services group of Fugro NV, and provides high quality aerial acquisition and photogrammetric mapping services to federal, state and city government; as well as private sector clientele. Based in Rapid City, South Dakota, Fugro Horizons serves both national and international markets.

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## **POSITION REQUIREMENTS**

### **Preferred Knowledge, Skills, and Experience**

- Bachelor's degree from an accredited college or university with major coursework in Computer Science; Management Information Systems; Engineering; Geology; Geography; Planning or other related field
- At least 4-7 years of professional experience in the analysis; development and implementation of complex GIS programming systems performing all steps of the development cycle
- Extensive programming experience using C is required, C# and / or C++ is also desired
- Experience with MicroSoft Visual Studio development environment; .NET Framework; ASP.Net; SQL; Visual Basic; Python; VB Script; or other high level computer programming language
- Experience with ESRI ArcGIS product suite (ArcInfo; ArcEditor; ArcView; ArcSDE; ArcIMS; ArcGIS Server or ArcEngine) in the role of a GIS Analyst or GIS Developer
- Experience performing all various steps in the development life cycle for GIS Applications (i.e. requirements analysis; detailed design; development; testing and implementation)
- GIS Certification Institute's Geographic Information Systems Profession (GIST) certification is highly desired
- Ability to analyze software used in production workflows and determine efficient approaches and improvement opportunities to reduce overall cycle time. Must be able to anticipate the entire change impact on all affected processes to ensure results are positive overall.
- Ability to transfer knowledge effectively to a variety of skill and experience levels.
- Ability to document information both on his/her own work and the work of others

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- Ability to solve technical impediments effectively and quickly with advanced solutions provided.
- Ability to conform to ISO 9001 and other industry standards for systems and software development
- Must be dedicated, committed to, and capable of maximizing productivity gains to the fullest extent possible.
- Experience with Microsoft Office software suite
- Familiarity with various image file types (e.g. TIFF, JPEG, etc)
- Excellent communication, interpersonal, and organizational skills
- Ability to manage multiple tasks with little or no supervision
- Ability to work in an organized fashion under pressure
- Self motivated team player
- Strong analytical and problem-solving skills

### **POSITION DUTIES/WORK RESPONSIBILITIES**

#### **Essential Job Functions**

- Work involves analyzing; evaluating; designing and developing GIS Systems; tools; databases; layers; and graphics such as Auto-CAD; photos; documents or 3-D images; which support programs and services requiring spatial and/or location database information
- Design; develop and implement customized GIS applications; systems and solutions including hardware; software and peripheral equipment
- Assist in development and/or refinement of new and current products, procedures and software to enable Fugro Horizons to continue to offer the high level of quality, innovation, and value expected by customers.

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- Train production staff on new procedures, and software and document necessary work instructions and procedures. Assist in developing formal training modules, when appropriate
- Meet with business and system users to gather and document systems; business requirements and proper workflow
- Provide application and data specification documentation; application design specifications and creation of test plans and scripts for application testing
- Coordinate projects with other department personnel; internal/external GIS resources; Technical and User Steering Committees
- Develop maintenance solutions based on established process; workflows and requirements
- Make presentations and recommendations to properly articulate findings during the application and data development process in the form of white papers; project updates and decision papers
- Supervise and evaluate supporting technical staff and report to a Project Manager
- Perform troubleshooting and production support assistance of GIS Systems and applications as needed
- Perform business; technical and data analysis
- Train customers in the use of software and hardware

### OTHER JOB DUTIES

- Ensure compliance with the requirements of Fugro Horizon's documented quality system throughout all proposal documents
- Project a professional appearance and cooperative attitude, maintain high ethical standards of confidentiality in representing the company to ensure a professional representation at all times

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- Support the estimating and planning of hours and resource allocation needs for new processes.
- Assist with technical production as needed.
- Remain current on changes within the industry through publications, periodicals, meeting and conference calls, and continuing education
- Excellent communication, interpersonal, and organizational skills
- Work as a team player with the department staff and other departments.
- Ability to type at least 40 words per minute.
- Thorough understanding of elements of Photogrammetry
- Assume additional responsibilities and activities as needed

### MANAGEMENT RESPONSIBILITIES

- Oversee other programmers, IT system administration and research and development efforts.

### PHYSICAL REQUIREMENTS

This position requires sitting (70%), standing (15%), and walking (15%). Additional physical requirements include:

- Lifting boxes of approximately 30 to 50 pounds
- Computer use, which involves extensive use of keyboard, mouse, and monitor
- Ability to write, understand, speak, and follow English

### WORKING CONDITIONS

- Dayshift hours primarily

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- Some travel required for training and other position related situations.
- Position may require working overtime as needed.

The job duties described in the above position description are not all-encompassing. There may be other job requirements that may be required that are not specifically listed above. Fugro Horizons reserves the right to change or edit job requirements at any time.

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