Senior Software Developer (Mar 2018)

3v Geomatics Inc. (3vG) is looking for a software development team lead.

The Company

3v Geomatics ([www.3vGeomatics.com](http://www.3vGeomatics.com)) is a fast-growing tech company in Vancouver, British Columbia. 3vG uses radar satellite images to measure changes on the Earth's surface for operational decision making. We develop software and image processing algorithms to monitor infrastructure and ground movement precisely and reliably. We strive to use our products to make a positive impact on people around the world.

3vG processes radar imagery collected throughout the world and tackles interesting problems on multiple levels: algorithm development and generality, software acceleration, and system scalability. We have developed our own hardware cluster comprising numerous compute nodes for processing radar big data. We invest significantly in ongoing research & development to improve our products.

The Position

We are looking for a software development expert with strong interpersonal and mentorship skills to lead our design team. The successful candidate will have a formal education in Computer Engineering, Computer Science, or equivalent, with 10+ years of hands-on development experience for live user-facing systems. He or she will have a passion for software development as demonstrated through past work experience.

The following skills and experience are highly sought for this position:

- Solid understanding of programming, design principles and software testing
- Expert-level programming ability in Python/C++/CUDA or equivalent languages
- Software team lead experience using proper software development practices
- Development and deployment in a Linux-based data processing farm
- Demonstrated initiative to improve software, systems, and processes
- Development experience within a multi-disciplinary team
- Familiarity with working in a CI environment

The successful candidate will have the following responsibilities:

- Enforce coding standards and software development practices; take charge of overall code quality
- Mentor junior and intermediate developers to build their technical skills
- Oversee software projects through inception, design, implementation, and maintenance
• Work across departments (Ops, R&D, IT) to support development on existing and new product lines
• Hire junior and intermediate developers to grow the development team
• Present project plans and progress to management

The Work Environment

At 3vG, you will be challenged to perform your best and develop your skills in an open and collaborative environment. Your role will grow as you expand your capabilities. You will be expected to contribute to a strong and supportive team where constant learning is the norm. Candidates must reside and be legally entitled to work in Canada.

We are centrally located in Vancouver, near Broadway and Cambie. The Company environment includes a diverse group of employees from around the world, flexible hours, work social events, and a secure area for bike commuters.

We invite you to submit your resume at info@3vGeomatics.com.
Linux Administrator (Mar 2018)

3v Geomatics Inc. (3vG) is looking to add a new member to our IT team.

The Company

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The launch of numerous radar satellites in the last decade, with many more upcoming ones, has contributed to a data explosion in our industry. Our storage and processing cluster has been expanding constantly, and we are now scaling up to process and store petabytes of data. We use high power CPUs and GPUs to quickly analyze large images with computationally dense algorithms.

The Position

We are looking for an individual to enhance and boost our existing infrastructure team. The "big data" solutions we are developing run primarily on Linux. Our image processing chains are written in Python, C++, and CUDA with occasional Bash scripting. We exclusively use Linux for our cluster and generally avoid proprietary technologies in our data processing stack. This role is to assist and complement our existing server and infrastructure team as they handle continued growth and expansion of our staff and compute & storage needs, including:

- Object storage: We are reaching the limits of centralized storage and are migrating to private distributed storage.
- Cluster efficiency: As we develop new software and processing chains, we need to continually monitor efficiency to ensure that existing compute power and storage are being used efficiently.
- Cluster expansion: As business needs grow and more complex software is written, our compute and storage clusters need to grow with them.
- Queue management: Ensuring that high priority compute jobs run as soon as possible requires regular tuning of our queue management system and occasional manual intervention.

The Linux Administrator is expected to help the existing IT team with day-to-day activities as well as contributing to the long-term expansion and evolution of our processing farm. The successful candidate will have a Diploma in a computer related field or equivalent background, with 2+ years of hands-on Linux experience; she or he
will have the right mix of hardware and software skills, and meet the following qualifications:

- Familiarity with Linux server administration including systemd, selinux and troubleshooting (specifically on CentOS 7)
- Comfortable in Bash
- Willing to dig into a problem and find the root cause
- Writes clear and detailed documentation
- Server hardware maintenance and troubleshooting skills
- Ability to work closely with non-IT personnel
- Willingness to learn new skills on the job

The following skills would be an asset:

- Comfortable in Python
- Experience creating and patching rpm packages
- Management of private distributed storage clusters (such as Gluster or Ceph)
- Experience with Amazon cloud storage APIs (S3 & Glacier)
- Compute farm management (Son of Grid Engine or similar)
- Python, C++, CUDA and Linux driver debugging
- Performance and health monitoring systems (Graphite, Nagios, SNMP)
- Automated deployment and system management (Foreman, Puppet, GPOs)
- Server racking and cabling
- Linux virtualization (libvirt & qemu)

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Software Developer – DevOps (Mar 2018)

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The Position

We are looking for an individual with strong analytical skills and motivation to exceed expectations. The successful candidate will have a formal education in a technical degree such as Computer Science, Engineering, Physics, or Mathematics. He or she will have a passion for software development as demonstrated through past work experience.

The following skills are highly sought in this position:

- Solid understanding of programming, design principles and software testing
- Expertise in Python
- Familiarity with the Linux operating system
- Enthusiasm for problem solving
- Quick-learner with analytical ability

Bonus Experience and Skills:

- Familiarity with working in a CI environment
- Experience with C++/CUDA
- Experience with test-driven development
- Understanding of graphs and graph-based algorithms
- Development experience in a multi-disciplinary team
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Software Developer – Object Storage (Mar 2018)

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The Position

We are looking for an individual to work with our DevOps and IT teams to develop an API layer between our new object storage cluster and our existing POSIX filesystem oriented codebase. The candidate will need to be familiar with object storage APIs and be comfortable with both Python and C on a POSIX filesystem. Familiarity with satellite radar imagery or spatial data would be an asset.

The successful candidate will begin by learning our current data formats, file structures and access requirements. They will then help design and develop the new API that will use descriptive data queries to retrieve and submit files to the object storage cluster. Later tasks will involve assisting R&D with updating existing POSIX oriented software to use the new API layer.

Preference will be given to applicants with demonstrable experience building and maintaining APIs, abstraction layers or data indexing systems.

The following skills are highly sought in this position:

- Enthusiasm for problem solving
- Quick-learner with analytical ability
- Skilled in Python and C
- Familiar with object storage APIs such as S3
- Experienced with database design and RESTful APIs
- Experienced writing or working on complex APIs and abstraction layers
• Comfortable working in a Linux environment (CentOS 7)

Bonus Experience and Skills:

• Object storage cluster maintenance
• Experience with test-driven development
• Familiar with satellite imagery and spatial data
• Database performance optimization experience

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