

Job Posting: Spatial Economic Software Developer and/or System Administrator

Career Level: Dependent on Qualifications

Job Summary:

HBA Spectro Incorporated is a developer of spatial economic modelling software used for forecasting future spatial growth patterns and analyzing policy regarding transportation, land-use, energy and the environment. HBA's clients are city and regional governments, US state governments and university research programs and institutes.

This position involves the development, release and support of our open-source spatial economic modelling software. You should be interested in software development, system administration, and/or client-support responsibilities for a small and growing specialty software and consulting company.

The responsibilities of the job depend upon your abilities and experience, including some or all of:

Software Development:

- Develop embedded GIS algorithms using PostGIS and/or ArcGIS
- Develop database design for fast spatial queries
- Develop and improve JDBC and Hibernate access to database from Java software
- Develop map server for viewing model spatial outputs and manipulating model spatial inputs
- Develop web app for control of model runs
- Manage bug-tracking and feature-tracking system, and related branching/tagging of code
- Improve and maintain a spatial economic short-run modelling system that solves a system of non-linear equations for a current or future year
- Improve and maintain a simulation of developer behaviour that manipulates a cadastral database of land parcels simulating construction over 30+ years.

System Administration:

- Purchase/install server and desktop computers
- Manage subversion server for code contributions from in-house and client-based developers
- Manage web server for corporate presence and documentation dissemination
- Manage project wikis
- Manage shared project document and data directories (using rsync and/or subversion)
- Assist with selecting and managing administration software (timesheets, project management, expense tracking)
- Manage remote VPN access to servers

Client Support:

- Review user contributions to code base
- Provide install and configuration support
- Work with client IT staff to coordinate hardware configurations
- Work with client IT staff to coordinate VPNs
- Manage user mailing list/forum.

Qualifications:

You should possess a computer science or computer engineering degree, and have experience in an Agile Software Development process.

You should have experience in scientific programming and/or geographical databases. You should understand object-oriented development and parallel programming. You should be well versed in mathematics and statistics, with an interest in optimization algorithms and other numerical algorithms and data structures.

You should have relevant experience in our current IT technology, which includes:

- Java
- Eclipse
- PostGIS
- ArcGIS
- Quantum GIS
- Subversion
- PostgreSQL
- SQL Server
- SQLite
- MySQL
- JDBC
- Hibernate
- Unix-type operating systems (e.g. Linux, BSD, Mac OSX)
- Windows administration
- VPN
- Web servers (especially Apache)
- Web application frameworks (e.g. PHP)
- Python
- Parallel programming
- Media wiki
- Rsync

You should be interested in transportation planning and/or city planning, should believe that public policy can make a difference in the world, and should believe in the power of analysis tools to inform public policy debates.

Position details:

The position is located in Calgary, a city of 1 million people, and the principle city in southern Alberta. <http://en.wikipedia.org/wiki/Calgary>.

Salary will be appropriate for qualifications.

Application:

To apply, send a resume and a cover letter stating why you are interested in the position to:

John Abraham
jea@hbaspecto.com

Applications received after May 12th 2008 might not be considered.