

Job Title: Scientific programmer - docker + django server and website development

Start Date: March 1, 2021

Job End Date : 1 year renewable pending on funding and performance

Salary: commensurate with experience

Are you interested in developing software to enable real-time disease surveillance and outbreak investigations, and playing a critical role in a national and international collaboration involving academic researchers, industrial partners and provincial and federal laboratories? Scientific and technical advances are transforming how we practice public health. More than ever, sophisticated computational workflows are needed to process large and heterogenous datasets. The Public Health Bioinformatics Lab, led by Dr. William Hsiao and located at Simon Fraser University (<https://www.sfu.ca/fhs/about/people/profiles/william-hsiao.html>), develops innovative solutions spanning the entire knowledge generation spectrum from data processing, management, analysis, to knowledge representation and discovery. We combine bioinformatics techniques (sequence analyses and workflow development) with semantic web technologies (knowledge graphs, ontology, RDF) to support better One Health oriented data sharing and genomic epidemiology solutions.

Currently we are developing a number of online resources and analytic pipelines for both food and nutrition applications as well as infectious disease surveillance and outbreak investigations using genomics data (genomic epidemiology). We are seeking a server and web software developer to contribute to the feature development of a number of projects, ranging from text mining and ontology mapping applications, to data validation and visualization systems to increase data interoperability between agencies. The position will provide experience in a new era of software development focused on standardization of data elements and structures using semantic web technology such as Web Ontology Language (OWL) ontology, the OBOFoundry.org suite of ontologies, and SPARQL querying. The position involves familiarity with setting up Docker server environments and front end website development with a focus on quality user experience, and an additional AJAX style "microservices" data request architecture to provide fast and low-complexity dynamic website content. The candidate, as part of a research group, will participate in scientific conferences, presentations, and publications.

The primary work location will be Simon Fraser University Burnaby Campus located in Greater Vancouver. Simon Fraser University is surrounded by wonderful greenspace on the Burnaby Mountain Conservation Area approximately 5 km from the edge of the city of Vancouver (and a three-hour drive north of Seattle, Washington, in the U.S.). SFU has been consistently ranked as Canada's top comprehensive University (Maclean's ranking no. 1 for 13 of the last 14 years). During the current pandemic, the candidate will work remotely until further notice.

**Qualifications:**

- 3+ years working experience in linux application server environment
- Bachelors or Master's degree in computer science, or related computational field
- Linux (e.g. Ubuntu, CentOS) and Apache or NGINX server familiarity
- Web development experience in setting up interactive websites with user authentication in for example Django or Wordpress
- Python, Javascript, JQuery, JSON, CSS, and HTML5 proficiency

- Coded apps in a web layout framework like Ant or Google Material Design Lite
- Postgresql or MySQL database installation and querying experience

**Other Considerations (experience considered an asset):**

- XML and RDF namespace familiarity
- OBOFoundry.org ontology family familiarity
- OWL 2.0 ontology curation and Stanford Protégé editor familiarity
- Triplestore database (e.g. BlazeGraph, GraphDB, Sesame) setup and SPARQL querying
- Node.js or Clojure application development, including form and field validation
- First order logic training and experience working with reasoning software

**Contact:**

Please send your cover letter, CV and names of two referees to Dr. William Hsiao (hsiaolab-jobs@sfu.ca) with the subject line: **Position-OntologyDeveloper**. We thank all applicants and regret that only those selected for an interview may be contacted further.

We hire on the basis of merit and are committed to employment equity. All qualified persons are encouraged to apply. We especially welcome applications from members of visible minority groups, women, Aboriginal persons, persons with disabilities, persons of minority sexual orientations and gender identities, and others with the skills and knowledge to engage productively with diverse communities. In accordance with immigration requirements, preference will be given to Canadian citizens, landed immigrants and permanent residents of Canada. We are committed to providing employees with a positive working environment supporting growth and flexibility. Simon Fraser is located in a beautiful conservation area in metro Vancouver with access to a wide range of recreational opportunities. Contact us to learn more.