

Software Engineer

The Generation Challenge Programme (GCP) is seeking a dynamic, innovative and self-motivated software engineer work with a team to develop software for the Integrated Breeding Platform (IBP, <http://ibp.generationcp.org/>). GCP partners are engaged in plant breeding worldwide and through its \$20m IBP project, the GCP seeks to improve the efficiency of these efforts by integrating molecular techniques and advanced information management into traditional breeding practices. Essential to this work are software tools that aid molecular plant breeders in deciding which parental lines are to be included in crosses and what subsequent selections are to be made based on all available phenotypic and molecular data. These tools will be developed using the open source cyber infrastructure of the NSF funded iPlant Collaborative (<http://www.iplantcollaborative.org/>) and will be assembled into an Integrated Breeding Workbench designed as a configurable workflow management system. The Software Engineer will be responsible for the following:

- Contribute to developing an open source informatics Workbench to support integrated plant breeding projects.
- Implement software according to the project requirements, specifications, and timelines.
- Contribute to the development of professional processes, procedures, and standards for delivering quality products in a timely fashion.
- Work within established development standards and methodologies, including agile development, pair programming, and test- and behavior-driven development.
- Work with other software engineers to document and promote best practices and patterns.
- Work with a team of developers or alone to evaluate/research current and new software development technologies, such as programming languages, application platforms, libraries, and data storage systems.

The Software Engineer will report to the Senior Software Engineer. He/She will interact closely with subject matter specialists as well as with users of the IBP (primarily molecular breeders and traditional breeders integrating markers into their breeding programs) to ensure that the users' needs are met and to assess future needs. This position, based with the iPlant development team at The University of Arizona, Tucson, USA, is for a fixed-term contract of two years, with possibility for renewal subject to performance and funding.

We are seeking candidates with the following qualifications:

1. Bachelors degree (or equivalent) in computer science
2. Experience working in a team environment on successful software projects.
3. Experience with relational databases (eg. MySQL or PostgreSQL)
4. Experience with object/relational mapping systems.
5. Experience with data and metadata management.
6. Experience with and understanding of agile development methodologies.
7. Experience with a version control system (eg. Subversion, CVS, or Git).
8. Excellent interpersonal and communication skills.

Experience or qualifications in the following areas would be considered a major asset:

1. Experience with HTML, CSS, and JavaScript.
2. Familiarity with Unix/Linux and Apache HTTP Server.
3. Understanding of common enterprise application architectural patterns, such as MVC.
4. Demonstrated ability to produce robust software, preferably in the scientific computing domain.
5. Basic knowledge of Web application development frameworks (eg. Struts, Spring, GWT).
6. Experience developing rich Internet applications (eg. with AJAX or Adobe Flex or any Javascript framework)
7. Background using scripting languages (eg. Python, Ruby, Groovy, Perl, or PHP)
8. Knowledge of the computational and data storage needs of the bioinformatics or computational biology communities.
9. Understanding of modern web application frameworks (eg. Ruby on Rails, Django, Grails)
10. Development experience using Web 2.0 technologies.

The Generation Challenge Programme (<http://www.generationcp.org>) is an internationally funded, non-profit research and training programme that was created by the Consultative Group on International Agricultural Research (CGIAR) to bring together research efforts at public and private research institutions in developed and developing countries to build a platform of publicly available genetic and genomic resources and tools that can be used to deliver the fruits of the Genomics Revolution to resource-poor farmers. The Generation Challenge Programme has an annual budget of USD \$14 million.

GCP is hosted by the International Maize and Wheat Improvement Center (CIMMYT <http://www.cimmyt.org>). CIMMYT has an annual budget of approximately US\$45 million and its mission is to help the poor in the developing world by increasing the productivity, profitability, and sustainability of maize and wheat-based cropping systems while protecting natural resources. CIMMYT employs about 600 permanent staff, including 89 internationally recruited staff and has regional centers and office in 13 other countries, especially in eastern and southern Africa. Rapid growth is occurring in south and East Asia.

CIMMYT/GCP offers a competitive remuneration package, including benefits, paid in US dollars. The software engineers will be University

Associates at The University of Arizona, Tucson, USA. Non US residents will need to obtain a relevant working visa.

GCP/CIMMYT is an equal-opportunity employer and strives for staff diversity in gender and ethnicity

Please send via e-mail your letter of application, CV/Resume (including full contact information), and names and contact information of three references to:

Human Resources Manager, CIMMYT
(Reference GCP 2011/01)

Email: jobs-cimmyt@cgiar.org and cc g.mclaren@cgiar.org

Deadline for applications: January 31, 2011

Shortlisted candidates will be interviewed by the Selection Committee beginning February.