

Bioinformatics Internship

Organization: The Ohio State University

Name of laboratory/unit/group within organization:

Plant Biotechnology Center (1060 Carmack Rd, Rightmire Hall)
Grotewold Lab

Point of Contact:

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Description of the position:

As new technologies are emerging in molecular biology field, the amount of data produced in short period of time is increasing exponentially. Currently, experiments which involve all the genes in a genome are conducted, as opposed to experiments that have been performed in past dealing with single gene, hence single output. Therefore, computational biology is becoming an inevitable part of molecular biology and biotechnology. The “computational help” not only facilitates processing of the data but also contributes to science by providing innovative interpretations of the data. The complexity in biological data attracts researchers from non-biological sciences who are interested in developing algorithms in order to discover “new meanings”.

Our lab provides an environment where one can be exposed to experimental and computational biology simultaneously since we are very active in both fields. We are currently hosting two websites containing databases with information on plant regulatory genomics and we are aiming to visualize gene regulatory networks that may explain the expression of all plant genes by gathering and overlaying data from various sources. Our efforts are aimed to help scientists understanding complex interactions by generating graphs and charts after interpretation of vast amount of data. We aim at having our results publicly available and we are also seeking assistance with web development.

There are additional projects in our lab involving 1) discovery of word (short DNA sequence) patterns in a plant genome, 2) generating a data analysis pipeline for massively parallel sequencing experiments in order to discover enriched regions after alignment of millions of short sequences to genome.

Individuals familiar with following languages are encouraged to apply:

Perl – Python – Ruby (preferred languages)

C++, C# or any other language

No biology knowledge is required.

Familiarity with MySQL and web technologies (especially AJAX) is a plus.

Period of internship:

Between 2 to 12 months [renewal is possible]

Salary:

\$4,000 to \$7,500 (per 3 months)