A Framework for Implementing Bioinformatics Knowledge-Exploration Systems

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Abstract

This project facilitates the discovery of new biological knowledge through the development of a web-accessible interface for answering specific problems by taking advantage of distributed tools. The target audience includes both biology end-users and software developers. End-users are exposed to problems that the system supports and can view dynamically generated reports specific to answering that problem. The system also allows easy addition and modification of problems and their implementations. The implementation of each problem is meant to reduce many of the difficulties of working with disparate data and analysis resources.

The framework was applied to several specific biologically-related problems thereby showing the effectiveness of the system and ease with which new problems could be added. The system may also be used as a learning tool to demonstrate how problems are solved using available resources.