Andrew E. Bruno

Center for Computational Research
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Appointments

Senior Programmer Analyst, Center for Computational Research, University at Buffalo

Education

· M.S. Bioinformatics and Biostatistics, University at Buffalo, February 2013.

   Thesis: *Fusion transcript simulation and application in testing fusion discovery methods*

· B.S. Computer Science, University at Buffalo, June 2003.

   Honors: *magna cum laude*

Areas of Expertise

Bioinformatics, High Performance Computing, Software Development, System Administration

Summary of Responsibilities and Skills

As a software engineer and system administrator at the Center for Computational Research, Mr. Bruno administers high performance Linux based compute clusters spanning thousands of nodes. He develops and supports the infrastructure to perform automated software installations, maintain user account management systems, and system monitoring tools for tracking resource utilization and energy consumption. Mr. Bruno administers private cloud installations using Eucalyptus and works on a large NSF funded grant to build a federated academic cloud-computing platform called Aristotle. Additionally, he provides computational support for UB's Next-Generation Sequencing and Expression Analysis Core running Illumina GAIIx for high throughput sequencing.

In his role as a software engineer, Mr. Bruno develops computational and scientific software applications with a diverse group of faculty members across the University at Buffalo. Working together with the Hauptman-Woodward Medical Research Institute he lead the development of a computational platform to study X-ray crystallization outcomes which includes xtuition (http://xtuition.org) a database of more than 16 million experimental outcomes.

Mr. Bruno leads the development of a multiple sequence alignment and visualization tool called TREAT (https://github.com/ubccr/treat), specifically designed to analyze variation in sequences caused by Uridine insertion/deletion RNA editing. This phenomenon occurs in trypanosomes, a group of unicellular parasitic flagellate protozoa such as the subspecies of Trypanosoma brucei which are the causative agents of Human African Trypanosomiasis (HAT or African Sleeping Sickness).