

Leading Global Multiple Sclerosis Research Center Taps IBM Analytics to Improve Patient Care

IBM

ARMONK, N.Y. - 26 Apr 2012: IBM (NYSE: [IBM](#) [1]) today announced that researchers from The State University of New York (SUNY) at Buffalo are using IBM analytics technology to study more than 2,000 genetic and environmental factors that may contribute to multiple sclerosis (MS) symptoms.

As part of the initiative, Researchers will tap into IBM's analytics technology to develop algorithms for big data containing genomic datasets to uncover critical factors that speed up disease progression in MS patients. Insights gained from the research will be shared with hundreds of doctors to better tailor individual treatments to slow brain injury, physical disability and cognitive impairments caused by MS.

Using IBM analytics technology, SUNY Buffalo researchers can for the first time explore clinical and patient data to find hidden trends among MS patients by looking at factors such as gender, geography, ethnicity, diet, exercise, sun exposure, and living and working conditions. The big data including medical records, lab results, MRI scans and patient surveys, arrives in various formats and sizes, requiring researchers to spend days making it manageable before they can analyze it.

Using an IBM Netezza analytics appliance with software from IBM business partner, Revolution Analytics, researchers can now analyze all the disparate data in a matter of minutes instead of days, regardless of what type or size it is. The technology automatically consumes and analyzes the data, and makes the results available for further analysis. As a result, researchers can now focus their time on analyzing trends instead of managing data.

MS is a chronic neurological disease for which there is no cure. The disease is believed to be caused by a combination of genetic, environmental, infectious and autoimmune factors making treatment difficult. According to the National Multiple Sclerosis Society, there are approximately 400,000 people in the US with MS, and 200 people are diagnosed every week. Worldwide, MS is estimated to affect more than 2.1 million people.

"Multiple Sclerosis is a debilitating and complex disease whose cause is unknown. No two people share the exact same symptoms, and individual symptoms can worsen unexpectedly," said Dr. Murali Ramanathan, Lead Researcher at SUNY Buffalo. "Identifying common trends across massive amounts of MS data is a monumental task that is much like trying to shoot a speeding bullet out of the sky with another bullet. IBM analytics helps our researchers fine tune their aim and match the speed of analysis with the rate of data coming into our systems. Our goal

is to demystify why the disease progresses more rapidly in some patients and get those insights back to other researchers, so they can find new treatments."

Since 2007, SUNY Buffalo researchers have been at the forefront of studying clinical and historical data from MS patients to identify genetic and environmental factors that contribute to the risk of developing the disease. These researchers are studying different age groups to see why the disease appears early in some children and why people who are diagnosed later in life tend to have a more aggressive course that affects their ability to walk. They are also looking at why MS is more common in northern latitudes and less common towards the equator, calling into question the role sunlight or lack thereof plays in the disease.

"Organizations that glean insights from big data and apply them to pervasive diseases like MS have the potential to greatly change the way patients receive treatment," said Dan Pelino, general manager, healthcare and life sciences at IBM. "The work that SUNY Buffalo is doing is a prime example of how IBM clients are literally changing the world with big data analytics, from advancing medical research, to generating clean energy and giving consumers what they want before they know they want it."

IBM Netezza appliances are optimized systems based on IBM BladeCenter technology that can analyze petabytes of data significantly faster than competing options, and at a much lower total cost of ownership. Unlike competing appliances, Netezza can be up and running in minutes instead of days or weeks.

For more information on IBM's Big Data strategy and portfolio, please visit www.ibm.com/bigdata [2].

IBM YouTube Analytics Channels:
<http://www.youtube.com/user/ibmbusinessanalytics> [3].

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