AI and the Geologist: A Partnership Between Man and Machine in the Mines

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Augmented intelligence in the mining industry

In industries such as mining, knowledge professionals are working with a rapidly growing volume of data. As exploration becomes tougher and gold deposits increasingly harder to find, mining companies are turning to cognitive technology like IBM Watson to improve exploration and operations by finding efficiencies and reducing costs. AI can help workers solve more complex problems, drive value, and gain competitive advantages.

For Industry, By Industry

Further, many companies are using cognitive computing to capture internal knowledge—the invaluable expertise and corporate memory lost as older engineers and geologists retire, taking their instincts and experience with them.

This spring, Vancouver-based gold producer Goldcorp Inc.—one of the largest gold mining companies in the world—became the first mining company in Canada to partner with IBM to use Watson in the analysis of vast amounts of data, from drilling reports to geological survey information. Goldcorp will initially use IBM’s cognitive technology for its exploration targeting efforts in its Red Lake, Ontario mine. Geologists will be able to surface new information from existing data more quickly and deliver regionalized insights that will assist in making the exploration targeting process more efficient.

IBM Watson and Goldcorp accelerate the pace to prove ore reserves

By using the technology to determine specific areas to explore next, geologists will be able to reach higher-value exploration targets faster, calculate geological models with more certainty and interpret the growing volume of data as geologists drive new discoveries. The improved accuracy of determining the exploration targeting process more efficiently.

The partnership between Goldcorp and IBM is learning to think like a geologist and help Goldcorp accelerate the pace to prove ore reserves: http://ibm.biz/WatsonOrebodyTargeting.

IBM Watson is creating a shift in the mining sector, especially in mineral exploration. We are witnessing the ability of artificial intelligence to help organizations capture and analyze their data—regardless of what type, amount or how or how fast it is moving—to make more informed decisions. Companies that make billion-dollar decisions based on gut instincts rather than the analysis of big data can be left behind in our growing information-based global economy.

What does this mean for the mining industry going forward?

Despite the challenges the industry has faced over the past few years, mining is often considered one of those industries that hasn’t benefitted as much from the rise of technology as other industries have. Until recently, there has been a lack of awareness in the mining industry about how cognitive computing technology could drive efficiency and profitability—leading to the misperception that the mining industry is ready for change. As exploration becomes tougher and gold deposits are working with a rapidly growing volume of data. As exploration becomes tougher and gold deposits increasingly harder to find, mining companies are turning to cognitive technology like IBM Watson to improve exploration and operations by finding efficiencies and reducing costs. AI can help workers solve more complex problems, drive value, and gain competitive advantages.

Through the use of cognitive technology, mining is witnessing the ability of artificial intelligence to help organizations capture and analyze their data—regardless of what type, amount of data gathered and analyzed is how mining companies are turning to cognitive technology like IBM Watson to improve exploration and operations by finding efficiencies and reducing costs. AI can help workers solve more complex problems, drive value, and gain competitive advantages.

IBM Watson will reach one billion consumers this year, with solutions being built, used and deployed in more than 45 countries, in nine separate languages, and across 20 different industries. We can use the success in the oil and gas industry as a good barometer for what is possible in the mining industry. At IBM, we are using this tested and proven analytics platform and adapting it to what we have seen demonstrated that cognitive substance analusis technology can lead to performance enhancement across the entire natural resources sector, with the potential to transform the future of mining industry.

Cognitive technology like IBM Watson makes machines capable of learning where there will be potential to create deeper insights that can unlock new business value, shifting from how well material is moved, to how well information can be used to increase efficiency and production. This shift will be highly influential by the vast amount of data mining companies are able to collect from monitors, sensors, and various digital and connected devices. Whether it be a drill hole and field mapping data, or geochemical surveys and geological maps, the data gathered and analyzed to have cognitive technology for its exploration targeting efforts.

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AI and the future

IBM Watson will reach one billion consumers this year, with solutions being built, used and deployed in more than 45 countries, in nine separate languages, and across 20 different industries. As the world’s new natural resource, big data enables AI to help organizations capture and analyze their data—regardless of what type, amount or how or how fast it is moving—to make more informed decisions. Companies that make billion-dollar decisions based on gut instincts rather than the analysis of big data can be left behind in our growing information-based global economy.

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