

Cognitive Computing for Exploration and Production

U. Mello¹, Renato Cerqueira¹, B. Zadrozny¹, B. Flach¹, R. de Paula¹

¹ IBM Research – Brazil

ABSTRACT

Cognitive Computing is the use of computational learning systems to augment human cognitive capabilities and accelerate, enhance, and scale human expertise to solve real world problems. Cognitive technologies are ready to address the challenges of the Oil & Gas industry and to transform practices in the industry in face of data overload, new frontiers, and a workforce and skills shortage.

In this presentation, we will discuss the current transformation of the industry as it moves toward cognitive systems, which can provide unprecedented gains in productivity in knowledge-intensive processes such as exploration and production. In particular, we focus on how to assimilate the information from millions of papers available in the G&G literature and the ability to ask questions about basins and reservoir attributes distributed worldwide, allowing geologists to tap quickly into information and make connections at a scale that is almost prohibitive today.

We will discuss aspects related to cognitive visual comprehension, which can assist seismic interpreters. We will also discuss other potential benefits of applying Cognitive Computing within the Oil and Gas industry and the evolution of our technical roadmap with respect to cognitive systems in the industry.