

Deep Learning The Revival of Artificial Intelligence

In machine learning, when high-level data abstractions are integrated with non-linear processes, deep learning is engaged.

Artificial intelligence (AI) has for several years been in the winter of research. With deep learning and the solutions of complex associations, a revitalization has occurred. In the world's top research laboratories and universities, the race is on to invent the ultimate learning machines that find books, movies, jobs, and dates for us, manage our investments, and discover new drugs. More and more, learnings are obtained from the trails of data we leave in our newly digital world. Like curious children, they observe us, imitate, and experiment by discovering any knowledge from data, and doing anything we want, before we even ask.

NBS Enterprises is active in both the research and applications of deep learning. As shown in Exhibit 1, big data are reduced to relevant facts of a domain. Metadata (data about data) further structure the data and produce a format compatible with a computational model that represents all artifacts of a physical network of interest.

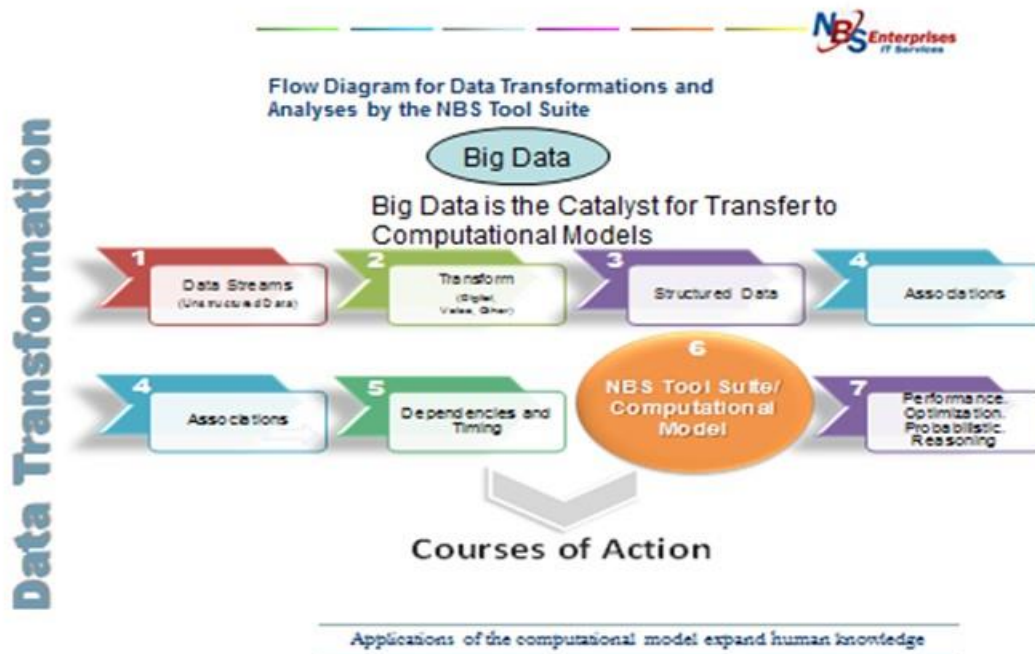


Exhibit 1

NBS Enterprises, LLC

The computational models transition semantic descriptions to quantitative representations suitable for deep learning. The models are exercised to develop answers to queries and to recommend courses of action.

Currently, NBS is active in the research of :

- a) Counter terrorism
- b) Intelligence analysis
- c) Autonomous self-organizing systems
- d) Optimal delivery of multiple packages with unmanned aerial vehicles

Applications comprise the optimal locations and management of robotic systems within a battlefield or a distributed commercial enterprise and the scheduling of resources such as hospital patients or integrated tasks within an assembly line. Assignments of resources in a battlefield for surveillance, weapons and logistics, as well as robotic systems, are accomplished simultaneously and in near real-time. Similarly, commercial assignments are computed, primarily for manufacturing enterprises, by integrating deep learning techniques, optimization and LEAN management,