Numenta Brings Brain-Based Principles to AI with SigOpt

Numenta is using their deep theoretical neuroscience research to advance the state of artificial intelligence (AI) and machine learning (ML). Given limits to infrastructure scalability and efficiency that can no longer be solved by adding more power and data, Numenta designed an experiment to develop a systems architecture with an AI training data set where the network would synthesize data and make it generalizable with total accuracy at scale by employing sparsity, a neuroscientific concept. This approach requires significant experimentation, which was enabled by the SigOpt Intelligent Experimentation Platform. SigOpt gave Numenta the ability to design experiments by asking the right questions as well as explore their modeling problem with significant depth and optimize their model to develop a novel sparse architecture.

"The SigOpt Intelligent Experimentation Platform saved significant wall-clock time, team time, and compute resources while also giving the team unique insights on the modeling space. As a result, Numenta developed a state-of-the-art neural network that was 75% sparse and still achieved over 77% accuracy."

Subutai Ahmad, VP of Research, Numenta

Products and Solutions
SigOpt Intelligent Experimentation Platform

Industry
Computer Software

Organization Size
11–50

Country
United States

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Case Study

1 For more complete information about performance and benchmark results, visit https://www.intel.com/content/www/us/en/customer-spotlight/stories/numenta-customer-story.html