NLP Entity Analytics and Logo Recognition in the Cloud: Military and Commercial Use Cases

Jack Davenport
DECISIVE ANALYTICS Corporation
jack.davenport@dac.us

Keywords: entity resolution, relationship extraction, logo recognition, cloud analytics

The overwhelming volume of unstructured text and imagery being collected by DoD and commercial organizations has resulted in the emergence of a wide variety of cloud-based analytics. These analytics are implemented in streaming architectures (such as Storm) and in batch jobs (such as MapReduce); operational systems require a hybrid approach due to the variety of data and analytic types.

DECISIVE ANALYTICS Corporation (DAC) has developed cloud-based text and imagery analytics to satisfy DoD and commercial use cases. NLP entity analytics encompasses not only extracting entities from unstructured text but also includes entity disambiguation and relationship extraction; the entities and their relationships are mapped to existing entity databases based on structured data. Therefore, intelligence extracted from unstructured text can be seamlessly fused with knowledge based on legacy methods and systems. Logo recognition allows commercial organizations to measure their brand coverage and media exposure. In the military context, terrorist organizations use logos or sophisticated graffiti to mark their presence in an urban area. DAC’s imagery analytics can identify these markers to measure the influence of organizations in urban areas. This presentation will discuss these use cases in a hybrid cloud environment, along with how the analysts interact with the analytic results.