

Cognitive Analytics for Life Sciences

Empowering Knowledge Workers with Cognitive AI

RESEARCH + DEVELOPMENT

Machine Learning and Natural Language Processing (NLP) tools are driving the next generation of business applications and creating entirely new technology categories. As the digital workspace evolves, organizations must consider the human context of business processes and provide an intuitive and collaborative analytics environment for their knowledge workers.

Cognitive analysis tools for *knowledge management* make it easy to augment the human decision-making process with Machine Learning and AI capabilities, enabling a new type of data automation. For life science and healthcare, it can provide a unified, comprehensive view of research texts and clinical data enabling stakeholders across an organization to reduce errors, advance diagnoses, improve decisions and patient outcomes.

Recently, Cognitive AI has been getting lots of attention from data architects and business users. Best known for automating mundane, repetitive tasks, providing machine-guided assistance and decision-making; these technologies allow an organization to discover useful patterns and mimic human cognition, reacting to important business events, opportunities or threats as they arise.

StreamScape's analytics platform provides *semantic data modeling*, *reference links* and other NLP features used to describe and query complex, unstructured multi-dimensional data. A critical aspect of analyzing unstructured data is the ability to discover relationships, turning information into a narrative; allowing knowledge workers to find associations, patterns or trends in order to understand the impact of constantly changing facts.

THE COGNITIVE ADVANTAGE



Knowledge Workers often scramble to find information buried in multiple disparate tools, resulting in hours of lost productivity. IT and business teams alike will often search a number of applications to uncover a piece of data needed for making a critical decision.

This is where an AI-powered digital workspace that augments human intelligence can help. Cognitive technology can facilitate *smart spaces*¹ that extend storage and file sharing technologies like S3, SharePoint or Box with tagging, semantic indexing and classification to enable search, query and secure access to unstructured data; helping workers cut through the clutter of process and focus on work that matters.

- Improved classification modeling to lower attrition and produce an improved, more targeted R&D pipeline for drugs and devices.
- Leverage change capture, statistics and ML algorithms to improve clinical trials and patient recruitment for tailored treatments to reduce trial failure and time-to-market.
- Clinical trial and patient record analysis to identify follow-on steps and discover adverse effects before products reach the market.

PUBLIC HEALTH

- Analyzing disease patterns and tracking outbreak transmission to improve public health surveillance and speed of responses.
- Knowledge Graphs to improve prediction of virus evolution, leading to more accurately targeted seasonal vaccines (e.g., choosing the annual influenza strains).
- Turn large amounts of public data into actionable inference that can be used to identify threats, needs and predict and prevent crises, for the benefit of populations.

CLINICAL ANALYSIS

- Collect, rank and publish data on innovative medical treatment procedures, assisting patients and researchers in determining care protocols and regimens that offer the best value and outcomes.
- Assemble clinical records or claims datasets to provide risk analysis and assistance to research firms or pharmaceutical companies in identifying patient groups for inclusion in clinical trials.
- Detecting individual and population trends in possible pandemic situations to help patients and control centers manage point-of-care, locate providers, and improve overall response.
- Monitoring medical devices and wearables, to monitor and analyze adherence to drug and treatment regimens, telemedicine results and predict adverse event.

Contact sales@streamscape.com to learn how Cognitive Analytics can help your business.

¹ Gartner – Top 10 Strategic Technology Trends for 2020