IBM Newsroom

IBM Advances Watson's Ability to Understand the Language of Business

- Announces first commercial availability of key technologies from Project Debater;

- Integrated into IBM Watson, the new capabilities help enable businesses to begin mining & analyzing some of the most challenging aspects of human language

NEW YORK, March 11, 2020 /PRNewswire/ -- IBM (NYSE: IBM), the leader in artificial intelligence for business[1], is announcing several new IBM Watson technologies designed to help organizations begin identifying, understanding and analyzing some of the most challenging aspects of the English language with greater clarity, for greater insights.

The new technologies represent the first commercialization of key Natural Language Processing (NLP) capabilities to come from IBM Research's Project Debater, the only AI system capable of debating humans on complex topics. For example, a new advanced sentiment analysis feature is defined to identify and analyze idioms and colloquialisms for the first time. Phrases, like 'hardly helpful,' or 'hot under the collar,' have been challenging for AI systems because they are difficult for algorithms to spot. With advanced sentiment analysis, businesses can begin analyzing such language data with Watson APIs for a more holistic understanding of their operations. Further, IBM is bringing technology from IBM Research for understanding business documents, such as PDF's and contracts, to also add to their AI models.

"Language is a tool for expressing thought and opinion, as much as it is a tool for information," said Rob Thomas, General Manager, IBM Data and AI. "This is why we're harvesting technology from Project Debater and integrating it into Watson – to enable businesses to capture, analyze, and understand more from human language and start to transform how they utilize intellectual capital that's codified in data."

Today IBM is announcing that it plans to integrate Project Debater technologies into Watson throughout the year, with a focus on advancing clients' ability to exploit natural language:

A. Analysis – *Advanced Sentiment Analysis.* IBM has enhanced sentiment analysis to be able to better identify and understand complicated word schemes like idioms (phrases and expressions) and so called, sentiment shifters, which are combinations of words that, together, take on new meaning, such as, "hardly helpful." This technology will be integrated into Watson Natural Language Understanding this month. In addition, we are announcing a new classification technology that will enable clients to create AI models that can more easily classify clauses that occur in business documents, like procurement contracts. Based on Project Debater's deep learning-based classification technology, the new capability can learn from as few as several hundred samples to do new classifications quickly and easily. It is planned to be added to Watson Discovery later this year.

B. Briefs – *Summarization.* This technology pulls textual data from a variety of sources to provide users with a summary of what is being said and written about a particular topic. An early version of Summarization was leveraged at The GRAMMYS this year to analyze over 18 million articles, blogs and bios to produce bite-sized insights on hundreds of GRAMMY artists and celebrities. The data was then infused into the red carpet live stream, on-demand videos and photos across www.grammy.com to give

fans deeper context about the leading topics of the night. It is planned to be added to IBM Watson Natural Language Understanding later in the year.

C. Clustering – *Advanced Topic Clustering.* Building on insights gained from Project Debater, new topic clustering techniques will enable users to "cluster" incoming data to create meaningful "topics" of related information, which can then be analyzed. The technique, which is planned to be integrated into Watson Discovery later this year, will also allow subject matter experts to customize and fine-tune the topics to reflect the language of specific businesses or industries, like insurance, healthcare and manufacturing.

IBM, has long been a leader in NLP, developing technologies that enable computer systems to learn, analyze and understand human language – including sentiment, dialects, intonations, and more – with increasing accuracy and speed. IBM has brought its NLP technology, much of which was born in IBM Research, to market via Watson. Product such as, Watson Discovery for document understanding, IBM Watson Assistant for virtual agents, and Watson Natural Language Understanding for advanced sentiment analysis, are all infused with NLP.

ESPN Fantasy Football uses Watson Discovery and Watson Knowledge Studio to analyze millions of football data sources each day during the season to offer millions of fantasy football players real-time insights. By processing natural language, Watson identifies the tone and sentiment of news articles, blogs, forums, rankings, projections, podcasts and tweets that cover everything from locker room insights to injury analysis. ESPN Fantasy Football surfaces these insights in player cards that snapshot the "boom" and "bust" potential of each player, as well as a "Player Buzz" section that summarizes the positive or negative commentary about a player.

KPMG, a multinational professional services network, and one of the Big Four accounting organizations, worked with IBM to create an AI solution based on a variety of Watson services, including Watson Natural Language Understanding. This technology makes it more effective for companies to identify, claim and retain potential R&D income tax credits. Developed by KPMG, the solution can help clients increase the amount of R&D income tax credits they capture because the Watson technology is able to review more documentation quickly while minimizing disruption to the client's business.

In the past year, KPMG clients have seen more potential for R&D tax credits, with some projects even seeing more than a 1000% increase in the number of documents reviewed. The solution helps clients uncover more potential activities that qualify for additional income tax credits, while reducing business disruption. As a result, engineers and scientists can stay focused on innovative R&D work by spending less time on income tax compliance activities.

Watch 'The Debater'

Check out the trailer for *The Debater*, a rare, behind-the-scenes look at the making of Project Debater though the lens of an eclectic team of researchers that dare to take AI into uncharted territory. Official Selection of the Copenhagen International Documentary Film Festival www.ibm.com/research/debater-film.

About IBM

For more information please visit IBM Watson.
For more information please visit IBM Research.
Developers and data scientists can access Watson APIs at IBM Developer.

Register here to view a webinar on the news which will be broadcast on March 18 at 1:00PM ET.

Forward-Looking and Cautionary Statements

Except for the historical information and discussions contained herein, statements contained in this release may constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are based on the company's current assumptions regarding future business and financial performance. These statements involve a number of risks, uncertainties and other factors that could cause actual results to differ materially, including the following: a downturn in economic environment and client spending budgets; the company's failure to meet growth and productivity objectives; a failure of the company's innovation initiatives; damage to the company's reputation; risks from investing in growth opportunities; failure of the company's intellectual property portfolio to prevent competitive offerings and the failure of the company to obtain necessary licenses; cybersecurity and data privacy considerations; fluctuations in financial results, impact of local legal, economic, political and health conditions; adverse effects from environmental matters, tax matters and the company's pension plans; ineffective internal controls; the company's use of accounting estimates; the company's ability to attract and retain key employees and its reliance on critical skills; impacts of relationships with critical suppliers; product quality issues; impacts of business with government clients; currency fluctuations and customer financing risks; impact of changes in market liquidity conditions and customer credit risk on receivables; reliance on third party distribution channels and ecosystems; the company's ability to successfully manage acquisitions, alliances and dispositions; risks from legal proceedings; risk factors related to IBM securities; and other risks, uncertainties and factors discussed in the company's Form 10-Qs, Form 10-K and in the company's other filings with the U.S. Securities and Exchange Commission (SEC) or in materials incorporated therein by reference. Any forward-looking statement in this release speaks only as of the date on which it is made. The company assumes no obligation to update or revise any forward-looking statements.

Contact

Michael Zimmerman
IBM Media Relations
mrzimmerman@us.ibm.com

[1] IDC Market Share: Worldwide Artificial Intelligence Market Shares, 2018: Steady Growth — POCs Poised to Enter Full-Blown Production (Doc # US45334719, July 2019)

SOURCE IBM
