

# **CES 2016: When IBM's Watson charts out gene-based diet plans and powers empathetic robots**

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At CES 2016, IBM CEO Ginni Rometty announced several new advances and partnerships built around the Watson cognitive computing platform. For IBM, this news signals the adoption of Watson technology by consumers and how it wishes to reach out to millions of individuals in addition to large corporations and enterprises already running on the Big Blue's cognitive computing technology.

The area that Watson will focus on for individual consumers seems to be healthcare and the Internet of Things(IoT). Fighting diabetes, charting out diet and exercise plan based on a person's genetic makeup, creating a personal health consultant and a robot that understands the world the way humans look at it - Watson has its work cut out.

Medtronic, an Irish medical device company, has collaborated with IBM to develop diabetes treatment with IBM Watson's cognitive technologies. By collection real-time streaming data, combining it with contextual information and analyzing it for signals and patterns, Medtronic believes that patients can better monitor blood glucose levels and take action that can help prevent cardiac disease, blindness, renal failure and amputation of fingers and limbs.

Under Armour, that has developed UA Record - a 24/7 activity, sleep and workout tracking system, partnered with IBM to create a Cognitive Coaching System that will serve as a personal health consultant, fitness trainer and assistant by providing users with timely and evidence-based coaching around their sleep, fitness, activity and nutrition, including outcomes achieved based on other 'like you'. Watson assesses and combines a variety of factors that affect health and fitness programs, including: Personal, Physiological and Behavioural data; Nutrition; Expert Training Knowledge; and Environmental factors.

Pathway Genomics, a privately-held global precision medical diagnostic company, unveiled at the Digital Health Summit at CES 2016 the closed-alpha release of Pathway Genomics OME app, powered by Watson. The Pathway Genomics OME app merges cognitive computing and deep learning with precision medicine and genetics to enable Pathway Genomics to provide consumers with personalized wellness information.

This alpha version of the app incorporates information from Pathway's "FIT" Test - a wellness-based diet, exercise, and metabolism report compiled with information from the users unique genetic traits, as well as their health habits, data from GPS and wearable health monitors in addition to information from the users Apple HealthKit.

Future versions of Pathway's OME will enable users to opt-in to include electronic health records, insurance information, and additional datasets that will enable OME to provide precise and actionable wellness recommendations. For example, a user might have genetic variants responsible for metabolising fats or for feeling satiated (full stomach). OME would then consider this information when providing genetically optimal diet plans or even restaurant and menu recommendations. Studies show that users who follow a genetically informed diet can lose significantly more weight than those who follow a "one size fits all" type of plan.

IBM and SoftBank Robotics Holdings Corp. have announced plans to offer a version of Watson for SoftBank Robotics' Pepper robots that can make sense of the hidden meaning in data that traditional computers cannot comprehend - including social media, video, images and text. The two organizations are exploring a range of use cases from an in-class teaching assistant to a nursing aide. Retail environments, that typically use tablets or kiosks, can also benefit with a robotic assistant that users can have a natural conversation with where their words as well as gestures and expressions are understood.

Home appliance manufacturer Whirlpool collaborated with Watson for connected home appliances that use cognitive analytics to provide personalised services to consumers. At CES, the brand introduced the Whirlpool Smart Kitchen Suite with CareSync system - a three-piece suite of connected appliances. The suite works with Nest and allows families to control select features of their kitchen appliances remotely - refrigerator, oven and dishwasher using the Whirlpool Smart App.

Be it winning quiz show Jeopardy or finding ways to cure cancer, the technology behind Watson has always been a matter of discussion in the tech industry. How IBM will monetise these partnerships and the ones to come in the future is still unclear as pinning a value to it is not as straightforward as putting a price on a box of software.