

## **Big Data**

The other interesting area is Big Data. Every day, we create 2.5 quintillion bytes of data — so much that 90% of the data in the world today has been created in the last two years alone. This data can come from everywhere: sensors used to gather climate information, software logs, posts to social media sites, digital pictures and videos, microphones, purchase transaction records, and cell phone GPS signals to name a few. This data is **big data** and it cannot be handled by traditional data processing algorithms. IBM solves this challenge with a platform architecture optimized for big data. It also provides different services for dealing with big data which we aim to use along with provided machine learning toolkits to solve different problems in different areas like taking care of elderly people by tracking their health status using different sensors, having intelligent decision support system, tracking and detecting the abnormal behaviors of known criminals, etc.

We will start by implementing an intelligent support system. The system should lie on top of a traditional support system. The stored data in traditional databases should be used and added to the HDFS using IBM platform. Then, we aim to use the stored data on Hadoop distributed file system (HDFS) to learn some prediction algorithms such as neural networks or support vector machines, etc. to make the decision process by staffs more efficient by automating some parts. We will use the provided machine learning toolkit by IBM Big data platform. The learning algorithms should be updated if the decision was successful to incorporate the new information as well. The system can be advanced in many other ways to make some official processes more efficient. We can add other features to the system as well, like clustering and categorizing documents based on their contents using NLP.

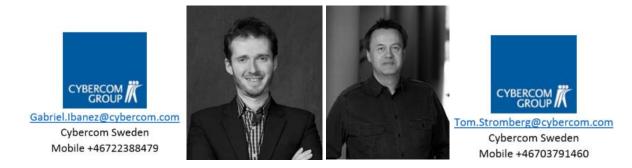
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