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Healthcare Big Data Use Case

The healthcare industry uses Big Data for a variety of reasons. Saving vital lives and enhancing the profitable sustainability of the healthcare industry is the binary contribution of Big Data towards enhancing the end outcomes. The healthcare companies and care giving organizations, staff and other segments of the population are collecting valuable data. The data being collected is of magnanimous volume. However, the readers should understand that the data being collected by the respective buckets are not useful until they are being refined for the next phase called analysis.

Genomic Research: Using Big Data, a pharmaceutical company was trying to make significant progress in a genomic research project. By harnessing the power of Big Data, HashCash helped one of its clients get accurate data mapping to identify disease causing genes. This identification protocol has been derived through accurate pin pointing of the disease causing genes. The actual process involves a complex algorithmic process to refine the data and use it to come to conclusive results.

Challenges Faced: There are several challenges which were faced during the process to fine tune the data mining process and offer the client feasible results. However, the same challenge was overcome with the following steps

- Writing codes on Python programming language to solve multiple problems which were being encountered during the process
- Formulate the right computational problems to solve a biological challenge
- Develop the right algorithms to solve different computational challenges

- Evaluate the algorithms created by us for the different set cases of data and analyze the accuracy in detecting the concerned problems

The Approach:

The approach taken was meticulously designed to accommodate the entire paradigm of DNA analysis

- Deciphering the messages within the ecosystem of the DNA
- Examining the DNA replication process which will help in designing an intelligent algorithm to refine it further down the line
- Take a step towards motif locating genes since the motifs encased in the DNA of genes needed to be located
- Roll dice to find the designs in DNA structures which was otherwise impossible to comprehend otherwise
- Preparing the bio-informatics report for a detailed structure to assist our client

Results:

The genomic research results were startling with end reports providing deep insights on major health problems. The entire paradigm for DNA genome got a boost with this program using quality algorithms.