

Innovative Concepts and Techniques of Data Analytics in Edge Computing Paradigms

Soumya K.

Kristu Jayanti College, India

Magaret Mary T.

 <https://orcid.org/0000-0001-5756-266X>

Kristu Jayanti College, India

Clinton G.

Sambhram Institute of Technology, India

EXECUTIVE SUMMARY

Edge analytics is an approach to data collection and analysis in which an automated analytical computation is performed on data at a sensor, network switch, or other device instead of waiting for the data to be sent back to a centralized data store. Cloud computing has revolutionized how people store and use their data; however, there are some areas where cloud is limited; latency, bandwidth, security, and a lack of offline access can be problematic. To solve this problem, users need robust, secure, and intelligent on-premise infrastructure for edge computing. When data is physically located closer to the users who connected to it, information can be shared quickly, securely, and without latency. In financial services, gaming, healthcare, and retail, low levels of latency are vital for a great digital customer experience. To improve reliability and faster response times, combining cloud with edge infrastructure from APC by Schneider electrical is proposed.

Edge analytics is a technique of information assortment and analysis during which an automatic analytical computation is performed on the information on a detector, network adapter, or different device instead of looking forward to knowledge/the info/the information to be came back to a central data store(Keithshaw,2019). Cloud computing has revolutionized however individuals store and use their knowledge, however there square measure some areas wherever the cloud is proscribed, bandwidth, security, and latency, and lack of offline access is a haul. to unravel this drawback, the user desires a strong, secure and intelligent high-end computing infrastructure. Once knowledge is physically placed in shut proximity to the users connected to that, the knowledge is shared quickly, firmly and at once in money services, play aid and low-latency retail square measure very important to a good digital client expertise. To boost irresponsibleness and quicker response times, sweep the cloud with advanced infrastructure from APC by Schneider(electrical).Edge analytics is that the assortment, processing, and analysis of information at the sting of a network at or close to a detector, network switch, or different connected device. Edge computing directs computational data, applications, and services away from Cloud servers to the network edge. The substance suppliers and application designers can utilize the Edge figuring frameworks by offering the clients benefits nearer to them. Edge computing is portrayed regarding high data transfer capacity, super low inactivity, and ongoing admittance to the organization data that can be utilized by a few applications (WazirZada Khan et al.,2019). Edge analysis is descriptive or diagnostic or prophetical analytics.

WHY EDGE ANALYTICS?

Is edge analysis another fun term coined to complicate our lives? Not really. Associations are quickly sending a huge amount of sensors or other shrewd gadgets at their organization edge, and the operational information they gather at this scale could be a significant administration issue. Edge Analytics offers several important benefits:

The first is to minimize data analysis latency. In many environments like oil platforms, airplanes, and CCTV cameras. In far off assembling conditions, there may not be adequate opportunity to send information to the focal information investigation climate and trust that the outcomes will impact choices to be made nearby in an ideal way. As mentioned in the drilling rig example, analyzing the data on the defective devices there and closing the valve immediately can be more efficient if needed.

Secondly the scalability of the analysis. As per increasing sensors and network devices, the volume of data they collect increases exponentially, and the burden on central data analytics resources to process this massive amounts of data increases.

17 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/innovative-concepts-and-techniques-of-data-analytics-in-edge-computing-paradigms/271709

Related Content

Program Comprehension through Data Mining

Ioannis N. Kouris (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition* (pp. 1603-1609).

www.irma-international.org/chapter/program-comprehension-through-data-mining/11033

Integrative Data Analysis for Biological Discovery

Sai Moturu (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition* (pp. 1058-1065).

www.irma-international.org/chapter/integrative-data-analysis-biological-discovery/10952

Neural Networks and Graph Transformations

Ingrid Fischer (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition* (pp. 1403-1408).

www.irma-international.org/chapter/neural-networks-graph-transformations/11005

Vertical Data Mining on Very Large Data Sets

William Perrizo, Qiang Ding, Qin Ding and Taufik Abidin (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition* (pp. 2036-2041).

www.irma-international.org/chapter/vertical-data-mining-very-large/11099

Data Mining and the Text Categorization Framework

Paola Cerchiello (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition* (pp. 394-399).

www.irma-international.org/chapter/data-mining-text-categorization-framework/10850