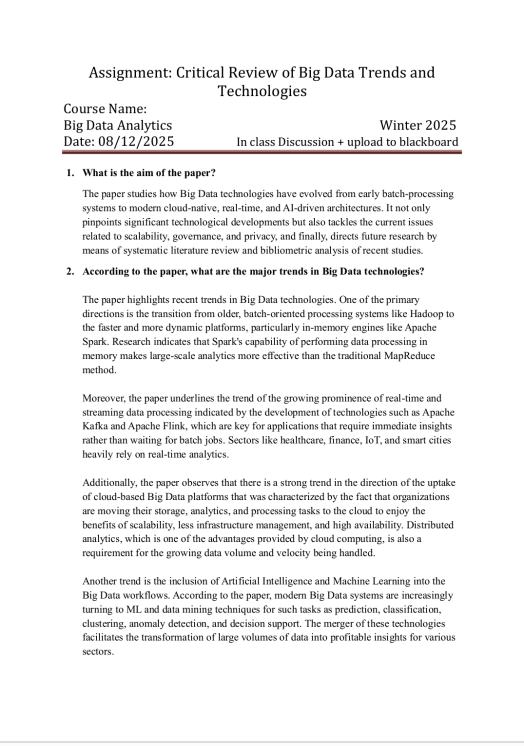
Digital Receipt

This receipt acknowledges that Turnitin received your paper. Below you will find the receipt information regarding your submission.

The first page of your submissions is displayed below.

Submission author:	Ujjwal Rastogi
Assignment title:	Assignment 1: Reading Report
Submission title:	Reading report - Ujjwal Rastogi.pdf
File name:	Reading_report_-_Ujjwal_Rastogi.pdf
File size:	188.78K
Page count:	3
Word count:	1,003
Character count:	5,818
Submission date:	08-Dec-2025 10:23PM (UTC+0000)
Submission ID:	2840414171



Assignment: Critical Review of Big Data Trends and Technologies

Course Name:
Big Data Analytics — Winter 2025
Date: 08/12/2025 — In class Discussion + upload to blackboard

1. **What is the aim of the paper?**

   The paper studies how Big Data technologies have evolved from early batch-processing systems to modern cloud-native, real-time, and AI-driven architectures. It not only pinpoints significant technological developments but also tackles the current issues related to scalability, governance, and privacy, and finally, directs future research by means of systematic literature review and bibliometric analysis of recent studies.

2. **According to the paper, what are the major trends in Big Data technologies?**

   The paper highlights recent trends in Big Data technologies. One of the primary directions is the transition from older, batch-oriented processing systems like Hadoop to the faster and more dynamic platforms, particularly in-memory engines like Apache Spark. Research indicates that Spark's capability of performing data processing in memory makes large-scale analytics more effective than the traditional MapReduce method.

   Moreover, the paper underlines the trend of the growing prominence of real-time and streaming data processing indicated by the development of technologies such as Apache Kafka and Apache Flink, which are key for applications that require immediate insights rather than waiting for batch jobs. Sectors like healthcare, finance, IoT, and smart cities heavily rely on real-time analytics.

   Additionally, the paper observes that there is a strong trend in the direction of the uptake of cloud-based Big Data platforms that was characterized by the fact that organizations are moving their storage, analytics, and processing tasks to the cloud to enjoy the benefits of scalability, less infrastructure management, and high availability. Distributed analytics, which is one of the advantages provided by cloud computing, is also a requirement for the growing data volume and velocity being handled.

   Another trend is the inclusion of Artificial Intelligence and Machine Learning into the Big Data workflows. According to the paper, modern Big Data systems are increasingly turning to ML and data mining techniques for such tasks as prediction, classification, clustering, anomaly detection, and decision support. The merger of these technologies facilitates the transformation of large volumes of data into profitable insights for various sectors.

Copyright 2025 Turnitin. All rights reserved.