The idea of artificial intelligence AI is an essential development in the technological niche that is quickly gaining traction. The significance of AI is evident in the sense that technological innovation is increasingly in use in the banking and financial section. In particular, financial institutions such as banks have embraced AI in efforts to avert fraudulent financial activities and to address the shortcomings inherent in traditional knowledge-based authentication (KBA) mechanisms, including the use of passwords and personal identification numbers (PIN). Consequently, financial entities continuously implement data analytics, AI, and ML initiatives to enhance protection in the banking section.

A discussion concerning the application of AI within the financial domain inevitably invokes another concept of ML with both technological ideas revolutionizing the business landscape across the globe. Functionally, ML facilitates the reception of electronic data, its analysis, and an accurate prediction of the various outputs that undergo continuous updates with the further acquisition of new data. Therefore, ML enhances the processing of large data in a relatively shorter duration under AI as the learning process enables machines to execute tasks promptly and to analyse data based on probability.

However, the predictions based on data analysed under ML and the harnessing of large data by AI reveals certain harmful tendencies which derogate from the established norms and potentially infringe on fundamental rights of subjects. An example of rights violations under ML is the discrimination arising in the analysis of data through proxy discrimination and biased training data. Therefore, this paper aims to evaluate the adequacy of the EU data protection regime under GDPR in the regulation of the fundamental rights of subjects during the process of large data harnessing and analysis based on AI . Moreover, the paper argues that the increasing adoption of AI in the study of personal data potentially adjusts the scope of protection to personal data under GDPR thereby necessitating the need for further investigation of how the restrictions on AI created under GDPR impede AI adoption or development in the financial sector.

To achieve the objective stipulated for this paper, the researcher will interrogate utilities of AI and ML as technological innovations within the financial services niche to determine how the current laws, regulations, and guidelines support the ideas. Secondly, the paper discusses the values contained in the GDPR and how the ideals coalesce with the development of AI. Third, this paper renders a comprehensive discourse concerning the efficacy of the specific rules formulated in the GDPR to identify their conformity to the use and development of AI in financial services, thereby offering a critique of the provisions and practical solutions for implementation. The specific areas under this part include analysis of consent, right to erasure, storage, right to information, explainability, portability, large data transfers by corporate, transparency, and psydonomisation.

**Assignment Questions**

* To what extent do the data protection initiatives under the EU regime (GDPR) facilitate the adoption of AI in the financial institutions?
* Whether the GDPR restrictions adequately protect personal data use in the AI context, thereby averting potential violations of fundamental rights of subjects within the EU?