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GSW83197: The advancement of Artificial Intelligence and Machine Learning in the field of Mining and Geoscience

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Abstract

Artificial Intelligence (AI) and Machine Learning (ML) find extensive applications across diverse sectors such as Smartphones, transportation, web services, sales and marketing, retail service, security, fraud detection, and healthcare. Machine learning and artificial intelligence have revolutionized the field of mining and geosciences by introducing innovative techniques and opening up new possibilities. However, the development of ML and AI-based geoscience applications is still in its early stages, with methods and objectives being fragmented and lacking a cohesive theoretical and application framework. This research investigates the utilization of Machine Learning and Artificial Intelligence in the fields of mining and geoscience. It thoroughly assesses and consolidates the present state, emerging trends, and prevailing challenges of ongoing studies in earth sciences. This study serves as a valuable resource for guiding future research and development endeavors in the application of ML and AI within the realm of earth science.

Keywords: Artificial Intelligence, Machine Learning, Mining, Geoscience