The influence of artificial intelligence on future mining jobs

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ABSTRACT

This paper focuses on the influence of artificial intelligence (AI) on the future landscape of mining jobs, mainly about the implications for both the industry and the workforce. Through analysis of examples from mining engineering, the contrast between AI and traditional mining practices is investigated.

The introduction of AI technology, such as artificial reality and automatic systems, has already changed the routine in the field of mining engineering. The application of automatic system has greatly improved the efficiency, productivity, and safety in mining, even though it may result in potential workforce displacement. This paper will talk about the evolving skills required for people dealing with the increasing AI adoption.

This study also identifies the emerging opportunities associated with the application of AI. Further investigation of strategies and policies employed by big mining companies provides guidance for the workforce to upgrade their skills and the significance of and the need for a smooth transition from traditional working thoughts to a highly AI-related system is also emphasized.

Meanwhile, the reliability of AI application is investigated. Selected cases provide a balanced recognition of AI's influence on mining-related jobs, considering diverse regional and economic differences. Ethical and safety considerations surrounding AI application in mining engineering, like algorithmic bias and reliable automatic system, are discussed. The importance of human intervention and the necessity of a healthy operating system is mentioned.

In conclusion, the widespread application of AI in future mining system is clearly inevitable. This paper offers a comprehensive assessment of the influence of AI on job prospects in mining engineering, with the aim of guiding those stakeholders, policymakers, and the workforce, facilitating a proactive approach to deal with the challenges led by AI in mining engineering.