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| Journal Name: | [**Current Journal of Applied Science and Technology**](https://journalcjast.com/index.php/CJAST) |
| Manuscript Number: | **Ms\_CJAST\_137471** |
| Title of the Manuscript: | **AI-Driven Mining 4.0: A Systematic Review of Smart, Sustainable, and Autonomous Technologies Across the Mining Lifecycle** |
| Type of the Article | **Review paper** |

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| PART 1: Comments | | |
|  | Reviewer’s comment **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | **Author’s Feedback** (It is mandatory that authors should write his/her feedback here) |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | The review contributes to the understanding of how Mining 4.0 technologies can be strategically applied to build a safer, smarter, and more sustainable mining sector. This paper presents a systematic review of technological innovations across the mining lifecycle, drawing from peer-reviewed studies, industrial reports, and its also addresses the challenges of implementation, such as regulatory barriers, high capital costs, and skills gaps. It presents a structured overview of key mining innovations, their operational roles, level of technological maturity, impact, and real-world examples in Table 1. |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | **Yes, suitable** |  |
| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. | **Yes,** comprehensive |  |
| Is the manuscript scientifically, correct? Please write here. | Yes, correct |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | Yes, **sufficient and recent** |  |
| Is the language/English quality of the article suitable for scholarly communications? | Yes, suitable |  |
| Optional/General comments | 1. Reduce the number of keywords. 2. Draw Workflow of the lifecycle mining from early-stage exploration to mine closure |  |

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| **PART 2:** | | |
|  | **Reviewer’s comment** | **Author’s comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Are there ethical issues in this manuscript?** | *(If yes, Kindly please write down the ethical issues here in details)* |  |

**Reviewer details:**

**Amal Hameed Khaleel, Basrah University, Iraq**