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Deep learning implementations in mining applications: A compact critical review. Supplementary Information

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1 Publication venues

The articles were published in 69 distinct venues, which included venues focusing on mineral resources, geosciences, remote sensing, sensors and robotics. Table 1 shows the top 10 venues according to the number of publications. The rest of the unlisted venues had either 2 (12 venues) or a single (47 venues) published deep learning (DL) focused article.

As mentioned, the articles were published in a diverse range of venues from different fields, with the majority published in geosciences and civil engineering related journals and conferences. Other venues include:

1. **Computer Sciences** venues such as Neural Computing and Applications (Mahdevari et al. 2017; Li et al. 2020b), Connection Science (Chen et al. 2022), Computational Intelligence and Neuroscience (Liang et al. 2021; Liu et al. 2021a), IEEE International Conference On Machine Learning And Applications (ICMLA) (D'Angelo et al. 2019), Expert Systems with Applications (Loncomilla et al. 2022), International Symposium on Visual Computing (Battulwar et al. 2020), Journal of Ambient Intelligence and Humanized Computing (Dey et al. 2021b), Soft Computing (Dey et al. 2021c), and International Conference on Intelligent Computing (ICIC) (Yuan and Duan 2018)

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Table 1 Top 10 publication venues based on the number of articles

Publication venues	Number of articles
Minerals	7 (Iwaszenko and Róg 2021; Ma et al. 2020; Li et al. 2021; Pan et al. 2022; Okada et al. 2020; Avalos et al. 2020; Cai et al. 2022)
Remote Sensing	5 (Maxwell et al. 2020b,a; Yan et al. 2021; Wang et al. 2020; Chen et al. 2020)
Sensors	5 (Xiao et al. 2020; Wang et al. 2021; Li et al. 2022; Sun et al. 2021; Balaniuk et al. 2020)
Computers & Geosciences	5 (Jin et al. 2022; Hao et al. 2022; Liu et al. 2021c; Xu et al. 2021; Baraboshkin et al. 2020)
Minerals Engineering	4 (Iglesias et al. 2019; Filippo et al. 2021; Liu et al. 2021d,e)
Rock Mechanics and Rock Engineering	3 (Shrivastava et al. 2022; Alzubaidi et al. 2022; Di and Wang 2021)
Natural Resources Research	3 (Choi et al. 2021; Hosseini et al. 2021; Williams et al. 2021)
Applied Sciences	3 (Baek and Choi 2020, 2019; Kim and Lee 2020)
Process Safety and Environmental Protection	3 (Dey et al. 2021a; Kumari et al. 2021; Lyu et al. 2020)
Energies	3 (Meng et al. 2022; Wang et al. 2022; Zhang et al. 2019)

2. **Robotics** focused venues such as International Conference on Robotics and Automation (ICRA) (Zeng et al. 2019), Australasian Conference on Robotics and Automation (ACRA) (Zeng et al. 2017), Journal of Field Robotics (Bewley and Upcroft 2017) and IEEE International Conference on Robotics and Biomimetics (ROBIO) (Mansouri et al. 2018).
3. **Multidisciplinary** venues such as IEEE Access (Liu et al. 2021b, 2020), Computers, Materials & Continua (Li et al. 2020a), PLOS ONE (Luo et al. 2019) and Ghana Journal of Technology (Asiedu et al. 2020).

DL implementation in this context could be considered as an engineering problem with regards to adapting computer science knowledge into the mining context; hence papers reporting this work may be suitable for publishing in different venues focusing on different topics such as a broader context of geosciences, specific to mining or applied knowledge such as engineering and robotics. The venues in which these articles were published have a correlation with the labs which the authors or main authors are associated with. For

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example, researchers from a robotics lab tend to publish their findings in a robotics venue as listed above.

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