

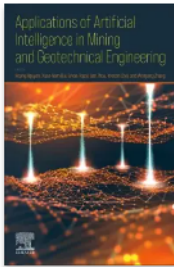


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Applications of Artificial Intelligence in Mining and Geotechnical Engineering

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Applications of Artificial Intelligence in Mining, Geotechnical and Geoengineering provides recent advances in mining, geotechnical and geoengineering, as well as applications of artificial intelligence in these areas. It serves as the first book on applications of artificial intelligence in mining, geotechnical and geoengineering, providing an opportunity for researchers, scholars, engineers, practitioners and data scientists from all over the world to understand current developments and applications. Topics covered include slopes, open-pit mines, quarries, shafts, tunnels, caverns, underground mines, metro systems, dams and hydro-electric stations, geothermal energy, petroleum engineering, and radioactive waste disposal.

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Chapter 22 - Application of artificial intelligence techniques for the verification of pile capacity at construction site: A review

[Chia Yu Huat](#)^a, [Danial Jahed Armaghani](#)^b, [Ehsan Momeni](#)^c, [Sai Hin Lai](#)^{a, d}

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Abstract

In the construction industry, piling is part of foundation system that supports the constructed structures. There are various types of piles that can be designed and constructed such as bored piles, micropiles, spun piles, and pre-cast reinforced concrete square piles. Ground conditions and costs are two main factors to decide the piling system to adopt in the construction. Prior to the construction of piling, theoretical design of the piles is required to identify the capacity of pile based on the subsurface investigation works information. To verify the