Special Issue

Recent Developments in the Machine Learning Modeling of Geotechnical Data

Message from the Guest Editor

In the geotechnical field, extensive engineering and construction datasets accumulated over time provide an excellent opportunity to apply machine learning models for the reliable prediction of engineering characteristics and other key features. These models can estimate geotechnical asset conditions and the characteristics of civil infrastructure, such as foundations and slopes, throughout their life cycle. Machine learning models are increasingly being applied to address challenges in geotechnical engineering. The difficulty of obtaining borehole logs and subsurface soil profiles in areas with scarce or unavailable data can potentially be mitigated using artificial intelligence (AI) methods. By leveraging historical data, machine learning offers a promising opportunity to reduce the costs associated with geotechnical subsurface investigations while enhancing the prediction and understanding of subsurface conditions. This Special Issue focuses on exploring emerging methods for developing and applying machine learning models to geotechnical data.

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