



Machine Learning to Mitigate the Vulnerability of the Mining Industry to Climate Change Impacts

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Message from the Guest Editor

Mining is a sector that is particularly vulnerable to climate change. Awareness of the potential negative impacts of climate change on the mining sector has grown in the past years. The effects of extreme weather events such as recurring droughts, floods and rising temperatures experienced in some of the world's leading mining regions, such as Australia, Chile and Mongolia, have led the mining industry to start thinking about their vulnerabilities and the risks climate change could pose. There has been little research and debate that takes a more comprehensive look at the links between climate change and mining. Machine Learning (ML) is a form of AI which extracts patterns from data and has been widely used for decades across different industries, but cases related to climate change effects on mining operations have not been explored much yet.

This Special Issue of Atmosphere will open a broad debate on how Artificial Intelligence and Machine Learning applications may be used to mitigate the consequences of climate change in mining operations and at the same time what is being done to incorporate these applications in the Re-Thinking Mining concept.





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Message from the Editor-in-Chief

Continued developments in instrumentation and modeling have driven atmospheric science to become increasingly more complex with a deeper understanding of concepts, mechanisms, and interactions. This is the field that innovation built and it has led to a better appreciation for the complexity with atmosphere. Human life is intertwined in this complexity as we strive to better understand our atmosphere. Climate change is constantly stretching the limits of our thinking and forcing new ideas and concepts to be played out. Welcome to the Anthropocene!

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