

Remote Sensing Image Interpretation

Proposal for Colorado School of Mines MCS Field Session, Summer 2017

Objective

Utilize Machine Learning for the automatic interpretation of Remote Sensing Data.

Discussion

Newmont Exploration makes extensive use of remote sensing data (i.e. satellite imagery) in the search for new mineral deposits. Interpretation is largely done manually which makes the data difficult to use at the country or regional scale where there can be thousands of scenes.

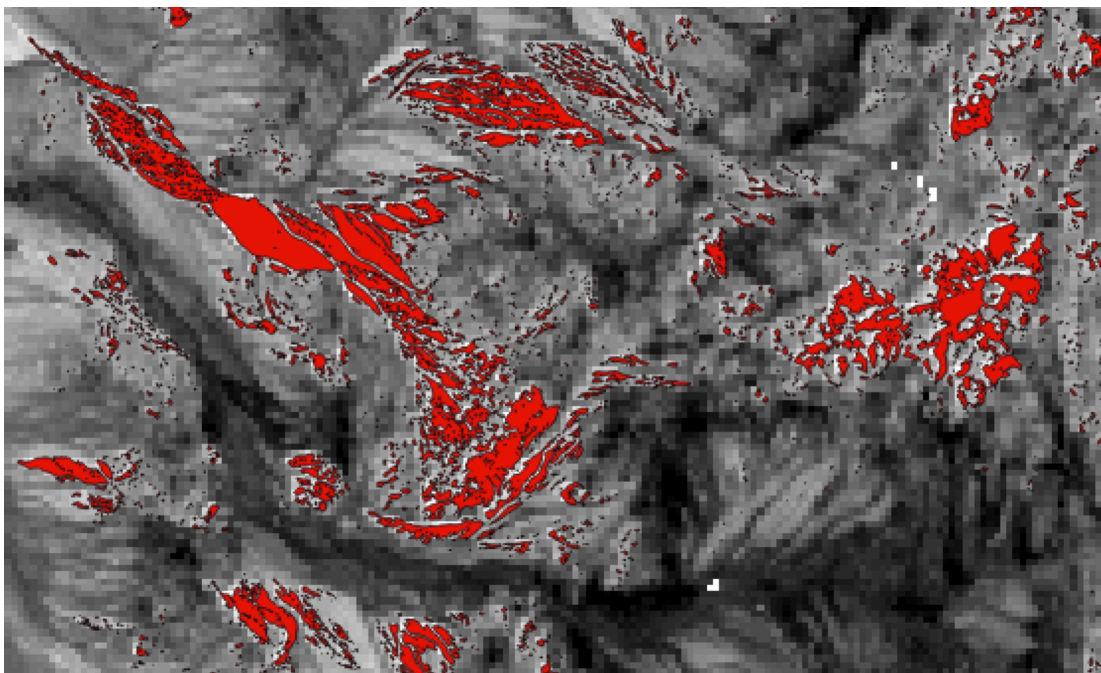
Newmont would like to develop a cloud based Machine Learning application that automates the process and equals or exceeds the quality of the manual interpretation.

There is some flexibility in the application design and backend toolset(s), but we currently envision a small web map interface to select a number of points which would then be used to “train” the Machine Learning tools and identify similar areas. For example, if you were looking to find all the rusted iron roofs in an image you would select a few typical roofs and the application would find everything else that looks like a rusted iron roof. The project team is variable, but ideally would be 3-4 people and the work can be completed at CSM or remotely.

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FeOx interpreted from ASTER satellite image.