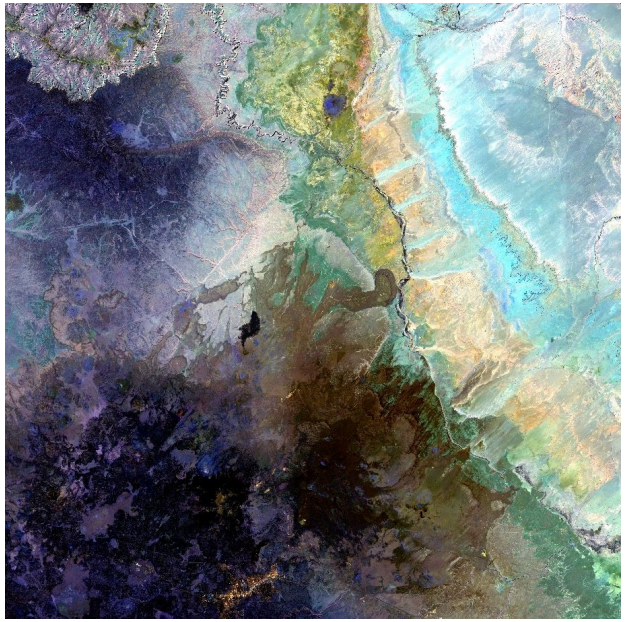
galvanize

Geomapper

Summary:



What is this project about?
Thermal infrared wavelengths of light allow information about the geology of the surface to be interpreted from satellite imagery. This project uses Sentinel-2 imagery and existing geologic mapping to train a predictive model using supervised deep learning that is capable of mapping the geology of unseen areas or difficult to reach locations.

Model Details:
Semantic Segmentation using TensorFlow DeepLab Xception and Rastervision model pipeline

3 key features of the project:
Satellite imagery, Geology, Neural Networks

Results
Model training took approximately 24 hours on an Amazon EC2 P3 instance with a Tesla V100 GPU and achieves an overall precision score of 0.73 and recall score of 0.71.

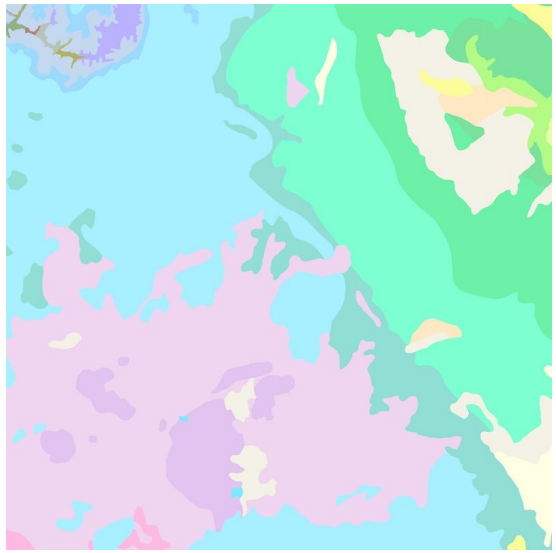
I'm available for hire!

Tech used:

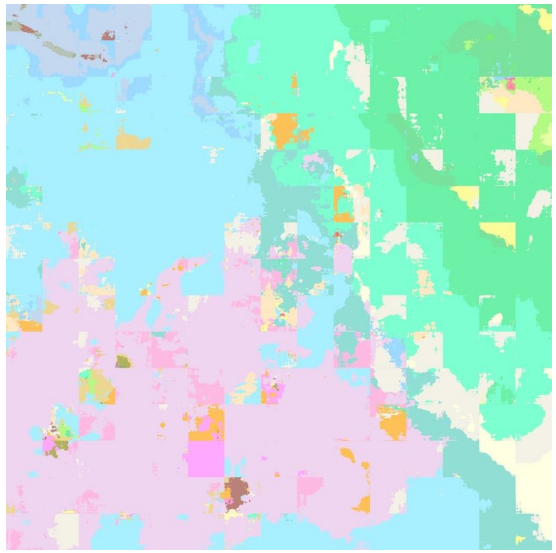
rastervision docker aws jupyter

NVIDIA xarray

Actual



Predicted



Project links: https://github.com/tjslezak/capstone
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