Image Classification of Land Use/Land Cover Types

Pre Requirements:

1. Tensorflow
2. Keras
3. Anaconda
4. Python
5. Datasets
6. Jupyter notebook
7. numpy

Installing Requirements:

1. Pip install tensorflow
2. Pip install keras
3. Pip install numpy
4. Download anaconda navigator from www.anaconda.org

The datasets used in this model training are given by the university

Steps in Model training:

1. we have built and trained an image classification model for land use/land cover classification using a custom data set. The model was trained using a Convolutional Neural Network (CNN) architecture.
2. We used the Keras library to build the model. The model was trained using a training data set proved by the college team, The training data was augmented using data augmentation techniques provided by the "ImageDataGenerator" class, which helps to increase the size of the training set and improve the robustness of the model.
3. Compile the model using the "Adam" optimizer, the "categorical_crossentropy" loss function, and the accuracy metric.
4. Train the model with fit method and with 11 epochs
5. Evaluate the model using evaluate method
6. Save the model

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