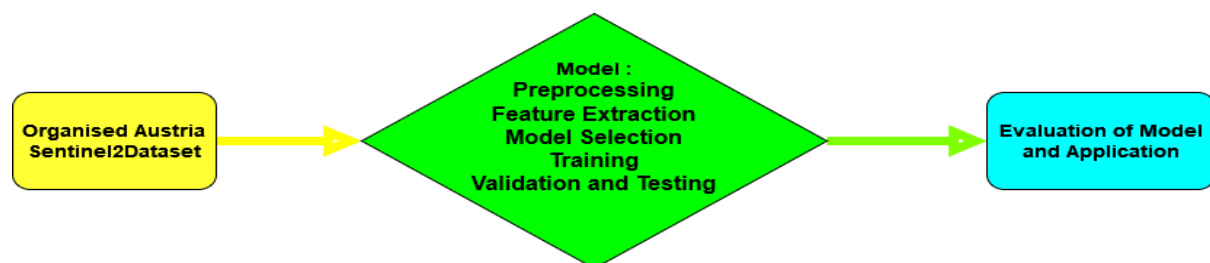


# Time Series Crop Type Classification and Vegetation Analysis by Sentinel2 Spectral Band Values.

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**Crop Type Classification:** Using Sentinel2 satellite data of Austria country, crop type classification has been done using three different supervised models like TempCNN, Transformer and Weighted LSTM were used. Each of the three were separately used for analysis after dividing Austria country into tiles, and splitting these tiles into training, validation and testing. Then performance were analysed using training accuracy vs. validation accuracy and training loss vs. Validation loss. Other performance metric like Accuracy %, F1 score is also taken into account



**Vegetation Monitoring:** The stages of crop growth for a complete agricultural cycle, spanning from September 2017 to August 2018 was analysed using NDVI (Normalized Difference Vegetation Index) values. For each month, each of the crop's NDVI values has been found out and the current status has been analysed using the four categories of NDVI values as shown in figure. So several things like disease affected crops, harvesting time of crops etc. all can be found out.

