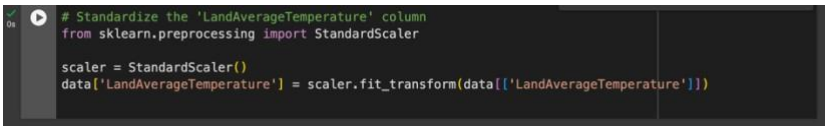
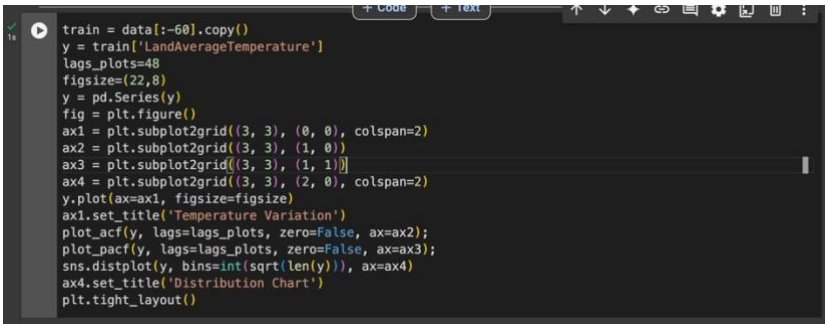
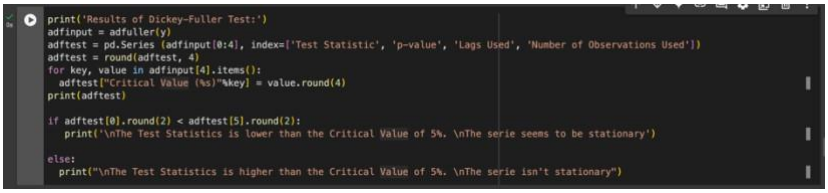
Data Collection and Preprocessing Phase

Date	29 November 2024
Team ID	740108
Project Title	Unveiling Climate Change Dynamics Through Earth Surface Temperature Analysis.
Maximum Marks	6 Marks

Preprocessing Template

The images will be preprocessed by resizing, normalizing, augmenting, denoising, adjusting contrast, detecting edges, converting color space, cropping, batch normalizing, and whitening data. These steps will enhance data quality, promote model generalization, and improve convergence during neural network training, ensuring robust and efficient performance across various computer vision tasks.

Heatmap Visualization	Convert temperature data into heatmap visualizations for geographic comparisons.
Regional Segmentation	Segment temperature data by geographic regions or time intervals to focus on specific trends or anomalies.
Standardized Data Inputs	Integrate batch normalization layers in the neural network to speed up training and enhance the model's performance.
Data Preprocessing Code Screenshots	
Loading Data	

Spatial Data Aggregation	
Temperature Standardization	
Synthetic Data Generation	
Trend Change Detection	
Noise Reduction in Measurements	NO

Heatmap Visualization	
Regional Segmentation	
Standardized Data Inputs