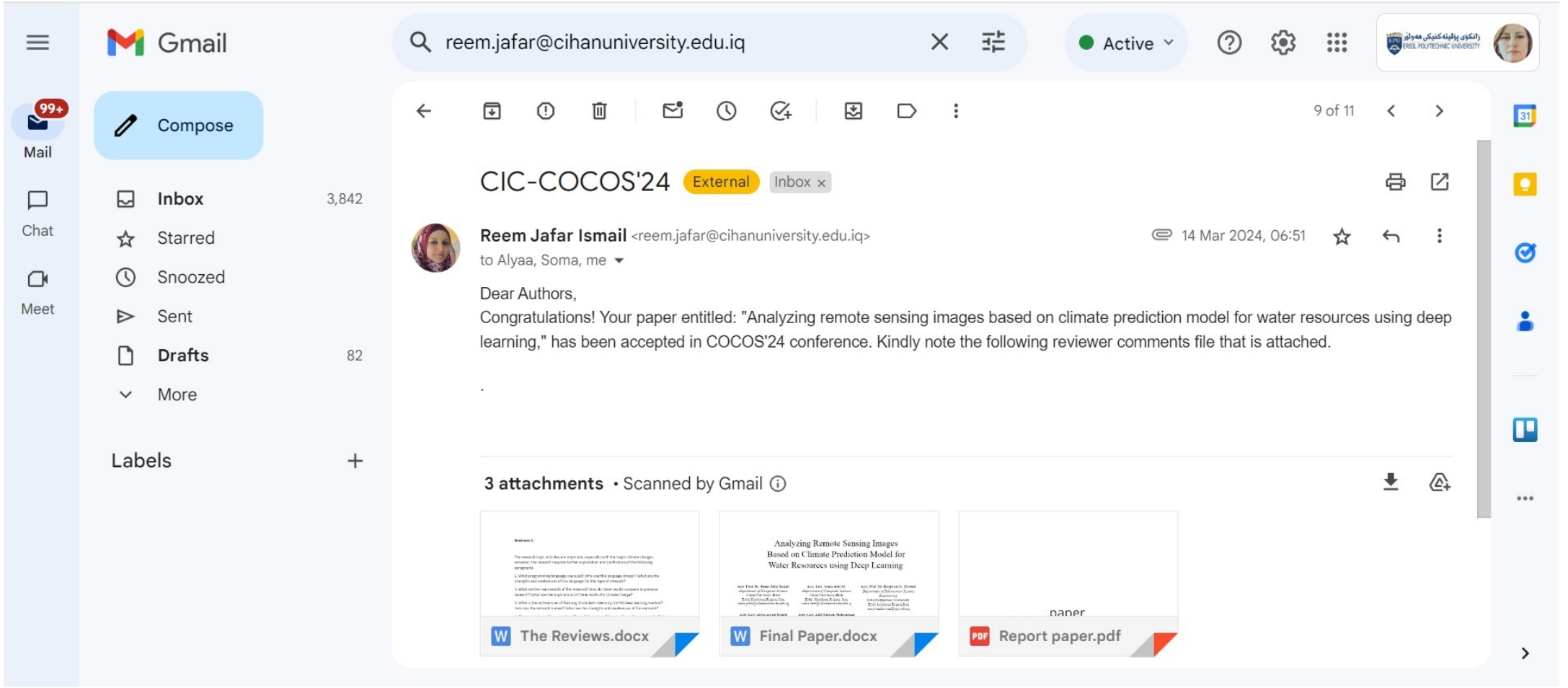
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Analyzing Remote Sensing Images Based on Climate Prediction Model for Water Resources using Deep Learning

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Abstract

In recent years, satellite imagery can provide key information about the properties of land, water, and natural resources. Climate change threaten the environment and the satellite image processing has shown its potential to support future prediction of natural resources. The aim of this research is to analyze the extracted information from the environmental image for water area and follow the changes that may happen over time. The proposed improved method will detect and give image analysis of any change and predicate the future change in environment by using Long Short-Term Memory (LSTM) deep learning method. The data that are collected is for Aral Sea over years from (2003-2018). The proposed model is two stages the first is to analyze the image change over time and the second stage is to apply predication using LSTM. The implementation compares between different results show a promising prediction especially when the input to the deep learning system are real remote sensing images for water area extracted from Google Earth Engine (GEE) and the data is for long years.

Keywords: Remote sensing images, GEE, climate change, LSTM prediction model