You previously added the ‘cnn’ layer for core probabilities. We have made some updates to the layer and the model name:

1. Naming the model NetNCC (Network for nowcasting convective cores)
2. Layer description to go under the nowcasting heading on the about page:

Convective cores represent that part of the cloud system where deep convection takes place. Klein et al. (2018) used thermal infrared images to locate convective cores and showed their association with intense rainfall. A deep learning-based model is used to predict the location of convective cores at different lead times. The output consists of the probability (in percentage) of a convective core being present at the target lead time. Here we present nowcasts for individual subdomains in Africa at lead times 1hr (60min), 2hrs (120min), 4hrs (240min) and 6hrs (360min). The accuracy of nowcasts decreases with lead time such that shorter lead times (<=2hrs) have much higher prediction accuracy as compared to the longer lead times.

Klein, C, Belušić, D, and Taylor, C M. [Wavelet Scale Analysis of Mesoscale Convective Systems for Detecting Deep Convection from Infrared Imagery](https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2017JD027432). Journal of Geophysical Research: Atmospheres 123, no. 6 (2018): 3035–50.

1. Decrease the resolution of the regridded geotiff to twice the current resolution in order to decrease the load time. I think it would just require a change in the   dx ( = 0.026949456 at present) variable in your script [AfricaNowcasting/CNN\_unets\_using\_1hr\_real\_time.py at master · StevenWells/AfricaNowcasting](https://github.com/StevenWells/AfricaNowcasting/blob/master/CNN_unets_using_1hr_real_time.py)
2. Using a larger spatial filter for lead times 4 and 6hr. This will require several simple updates to the realtime nowcasting script. I’ve included the changes (only) in the attached script for your reference.

Spatial filter = 5x5 for lead time 1 and 2 hr

15x15 for lead time 4 and 6 hr

04/06/2025

Add Senegal domain on the portal

Senegal domain is on a regular 0.04 deg grid (need to regrid tir inputs before prediction, rest is same as other domains)

Spatial filter = 5x5 for lead time 1 and 2 hr

15x15 for lead time 4 and 6 hr