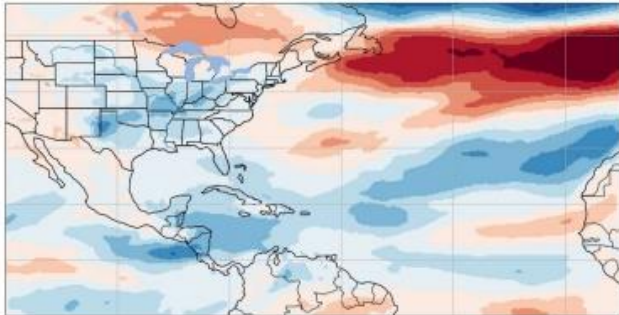


Tropical Storm Seasonal Forecast

SKYFORA

Next-generation Weather Intelligence



Skyfora Tropical Storm Seasonal Forecasts provide users with unique insight into the upcoming and the remaining of an on-going tropical cyclone season. By using latest machine learning techniques, the probability distributions of each possible outcome based on automatically extracted atmospheric predictors is modeled. Extensive validation experiments show undisputable skill and improve the reliability in seasonal forecasting.

Features and frequent release schedules

The seasonal and mid-season forecasts include probabilistic estimates of tropical cyclone genesis, tropical cyclone strength and regional landfall distributions according to main affected regions per basin.

The North Atlantic Seasonal Forecast is released monthly from March until September and after a significant event for insurance sector contract reviews. Seasonal Forecast for other basins are released according to customer requested schedules.

Global Coverage

Skyfora has optimized Seasonal Forecast models for each global basin, i.e., North Atlantic, Eastern North Pacific, Western North Pacific, South Pacific and Australia, North Indian Ocean and South Indian Ocean.

Because of the in-house developed solution and knowledge in machine learning, meteorology and atmospheric physics, Skyfora also offers model customization to meet customer specific needs, such as the needs of a specific geographical area or a specific industry.

** Skyfora Tropical Storm Seasonal Forecast is continuously developed and improved. Latest features and functionalities can be verified with your contact persons.*

Skyfora Tropical Storm Seasonal Forecast includes

- ✓ Seasonal probabilistic estimates of
 - tropical cyclone genesis
 - tropical cyclone strength according to Saffir-Simpson, or other regional scale with
 - landfalls per region
- ✓ Basin specific reports:
 - North Atlantic
 - Eastern North Pacific
 - Western North Pacific
 - South Pacific and Australia
 - North Indian Ocean
 - South Indian Ocean

Tropical Storm Seasonal Forecast Benefits:

- ✓ Frequent updates, one per month, or as agreed
- ✓ Evidence of skill, includes a transparent report
- ✓ Possibilities for custom forecasts and reports for specific needs.

Tropical Storm Tracker Features:

- ✓ Proprietary, in-house developed AI algorithms using latest available deep learning technologies applied on satellite images, weather advisories, atmospheric data, oceanic data etc.

Tropical Storm Seasonal Forecast, License & Deliverables

Skyfora Tropical Storm Tracker Seasonal Forecasts are licensed based on annual subscriptions. The price for Seasonal Forecast depends on chosen basins and number of monthly seasonal forecast desired. The monthly reports are provided as separate delivered reports and/or API interface upon request.

Skyfora Tropical Storm Offering

In addition to the Seasonal Forecasts Skyfora offers a Tropical Storm Nowcast including a 0-120 -hour landfall forecast for active tropical cyclones. The Nowcast is updated every 10-15 minutes, whenever a new satellite image or any other data point is available. It identifies rapid intensifications and changes in tropical cyclone direction as it happens. The 0-120 hour frequently updated forecast includes forecasts of landfall parameters and a comparison against official advisories. The SaaS service is used either standalone or together with already used catastrophe models.

Both the Seasonal Forecasts and the Nowcast with 0-120 hours landfall forecast are continuously being developed and improved. To get latest updates of pricing, features and proven skill, don't hesitate to get in touch:

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Skill & Comparison Data

For each report, skill is proven separately together with an analysis describing the results and level of certainty to increase transparency and reliability. Detailed model architecture and automatically extracted features are not disclosed in detail. In the tables below Skyfora's skill in predicting Named Storms, Hurricanes, Major Hurricanes and ACE for Atlantic Seasonal Forecast for the years 2010 – 2020 based on April data is proven.

Table 1. Mean absolute prediction errors for pre-season models (April-May) during 2010-2020

Agency	Named Storms	Hurricanes	Major Hurricanes	ACE	# test years
1	4,37	2,66	1,35	61,16	11
2	4,91	2,25	1,5	#N/A	11
3	4,18	3,05	1,55	57,57	11
4	4,18	2,27	1,18	50,13	11
Skyfora	3,74	2,17	0,92	27,49	11
Baseline	7,84	3,14	1,79	64,67	11

Table 2. Relative improvement in forecast skill over the baseline model (climatology, mean over 2010-2020).

Agency	Named Storms	Hurricanes	Major Hurricanes	ACE	# test years
1	44 %	15 %	25 %	5 %	11
2	37 %	28 %	16 %	#N/A	11
3	47 %	3 %	13 %	11 %	11
4	47 %	28 %	34 %	22 %	11
Skyfora	52 %	31 %	49 %	57 %	11

Table 3. Years 2010 – 2020 hurricane count prediction (red = historical, blue = prediction, black = true value).

