

Panchang Intelligence for Long-term Weather Prediction

Powered by Panchang



BUSINESS CONTEXT

Today, weather prediction apps available in the market are able to forecast with reasonable accuracy for a certain period of time, sometime up to a couple of weeks. But for longer durations into the future, these applications do not showcase the same level of accuracy.

Traditionally, the ancient Indian Almanac

called Panchang has provided fairly accurate predictions for rainfall for more than a year in advance.

There is a need to assess this accuracy and relevance of the Panchang across the world, and convert this into an application that can be used in agriculture and other weather dependent industries.

OUR APPROACH AND SOLUTION



Discovery: At Tech Mahindra, this began as a research project, where we analyzed and developed a weather forecast based on Panchang rules that involve planetary position. After this, we tested this with 40 years of revalidated data (1980 to 2020) across 7 locations in India and 8-10 locations across the world, spanning all continents from Australia to America. The results, so far, have showcased high levels of accuracy across the globe. We will be publishing the results across journals to ensure our findings can be further validated and incorporated into the application accordingly.



Optimization: We also built a weather channel for anyone to visit and view the results. An API for the same has also been made available. The weather channel takes input as a GIS location in terms of Latitude and Longitude. It also has a feature to locate areas on the map either directly or through a pin code (India).

Daily rainfalls can be predicted based on this location feature as well as the time range filter.



Roadmap: We believe that this API and our weather Channel will be relevant for multiple areas,

- Agriculture
- Insurance
- Banking and Finance
- Building Infrastructure

And many more



No forecasting model in the world has 100% accuracy even with the best of technology. The forecast accuracy is over 80% in a 24-hour period and more than 60% over a five-days period.



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