Prophet is a model for time series prediction with yearly, weekly and daily seasonality. It also incorporates holiday effects.

It works best with clear seasons and is robust to missing data, as well as shifts. It is also resilient to outliers (COVID) and large time skips.

* A piecewise linear or logistic growth curve trend. Prophet automatically detects changes in trends by selecting changepoints from the data.
* A yearly seasonal component modelled using Fourier series.
* A weekly seasonal component using dummy variables.
* A user-provided list of important “holidays” - essential periods of time that you know in advance that break the trend.

Jakub’s Top Tips

1. Using fourier series to analyse data beforehand can be a good way to conclude whether the Prophet model would make a good fit.
2. Since M3 typically gives sparse data on topics, unless we find additional data, prophet may do poorly in prediction due to bad regression of the parameters.
3. Prophet models have good short term predictive powers, but weaker long-term predictive power.

**Notes not for writeup**

<https://facebook.github.io/prophet/>











