

# PROPHET

## INSTALL REQUIRED PACKAGES

```
install.packages('forecast')
```

```
library(forecast)
```

```
install.packages('prophet')
```

```
library(prophet)
```

## IMPORTED DATASET

```
dt<-read.csv(file.choose())
```

```
dt
```

```
head(dt)
```

```
      y      ds
1 97424 2000-01-01
2 93518 2000-01-02
3 82728 2000-01-03
4 45018 2000-01-04
5 70922 2000-01-05
6 50689 2000-01-06
```

## BUILDING PROPHET MODEL

```
model<-prophet(dt,weekly.seasonality = "TRUE",daily.seasonality =
"TRUE",yearly.seasonality = "TRUE")
```

```
pred<-make_future_dataframe(model,freq = 'month',periods = 12)
```

## FORECASTING THE SALES

```
forecast<-predict(model,pred)
```

```
tail(forecast)
```

```
      ds      trend additive_terms additive_terms_lower
151 2000-12-23 17778.005      8072.909      8072.909
152 2001-01-23 11262.086     -31578.083     -31578.083
153 2001-02-23  4746.167     -26907.131     -26907.131
154 2001-03-23  -1139.179     -27290.292     -27290.292
155 2001-04-23  -7655.098     -31158.707     -31158.707
156 2001-05-23 -13960.826     -6008.305     -6008.305
      additive_terms_upper      daily daily_lower daily_upper      weekly weekl
y_lower
151      8072.909 -18210.91  -18210.91  -18210.91  7433.553      7
433.553
152     -31578.083 -18210.91  -18210.91  -18210.91  5440.045      5
440.045
153     -26907.131 -18210.91  -18210.91  -18210.91 -3259.495     -3
259.495
154     -27290.292 -18210.91  -18210.91  -18210.91 -3259.495     -3
259.495
155     -31158.707 -18210.91  -18210.91  -18210.91 -5363.643     -5
363.643
156     -6008.305 -18210.91  -18210.91  -18210.91  5523.558      5
523.558
      weekly_upper      yearly yearly_lower yearly_upper multiplicative_terms
151      7433.553 18850.267 18850.267 18850.267      0
```

152	5440.045	-18807.216	-18807.216	-18807.216	0
153	-3259.495	-5436.724	-5436.724	-5436.724	0
154	-3259.495	-5819.885	-5819.885	-5819.885	0
155	-5363.643	-7584.152	-7584.152	-7584.152	0
156	5523.558	6679.049	6679.049	6679.049	0
multiplicative_terms_lower multiplicative_terms_upper yhat_lower yhat_upper					
151	0		0	-3260.525	5512
152	0		0	-49964.594	1057
153	0		0	-52403.491	725
154	0		0	-59449.469	492
155	0		0	-70963.754	-819
156	0		0	-50227.733	977
trend_lower trend_upper yhat					
151	17777.993	17778.016	25850.91		
152	11262.072	11262.099	-20316.00		
153	4746.150	4746.183	-22160.96		
154	-1139.200	-1139.161	-28429.47		
155	-7655.122	-7655.076	-38813.81		
156	-13960.854	-13960.801	-19969.13		

## PLOT OUTPUT

prophet\_plot\_components(model, forecast)

