

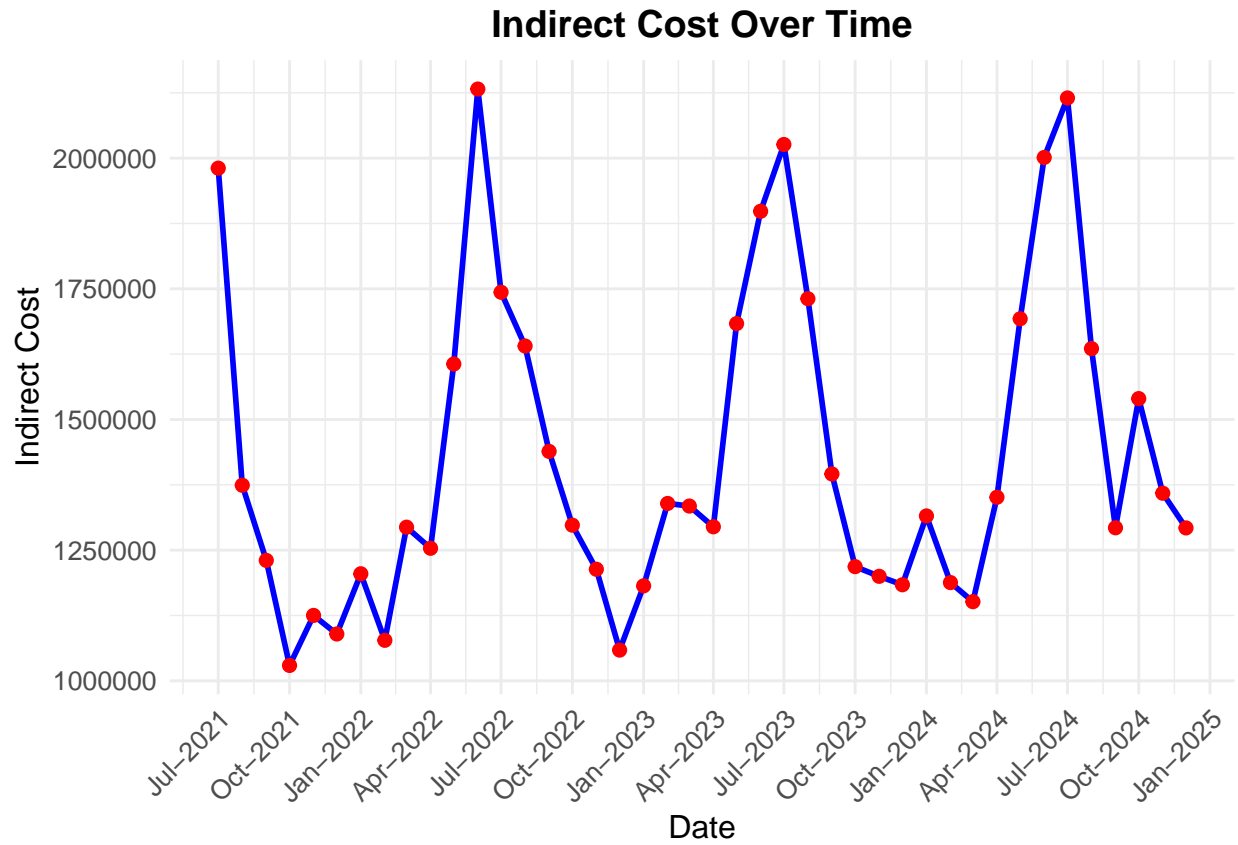
# Indirect Cost Forecasting

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## R Markdown

```
## Registered S3 method overwritten by 'quantmod':  
##   method           from  
##   as.zoo.data.frame zoo  
  
## Loading required package: Rcpp  
  
## Loading required package: rlang  
  
## Warning: Using 'size' aesthetic for lines was deprecated in ggplot2 3.4.0.  
## i Please use 'linewidth' instead.  
## This warning is displayed once every 8 hours.  
## Call 'lifecycle::last_lifecycle_warnings()' to see where this warning was  
## generated.
```

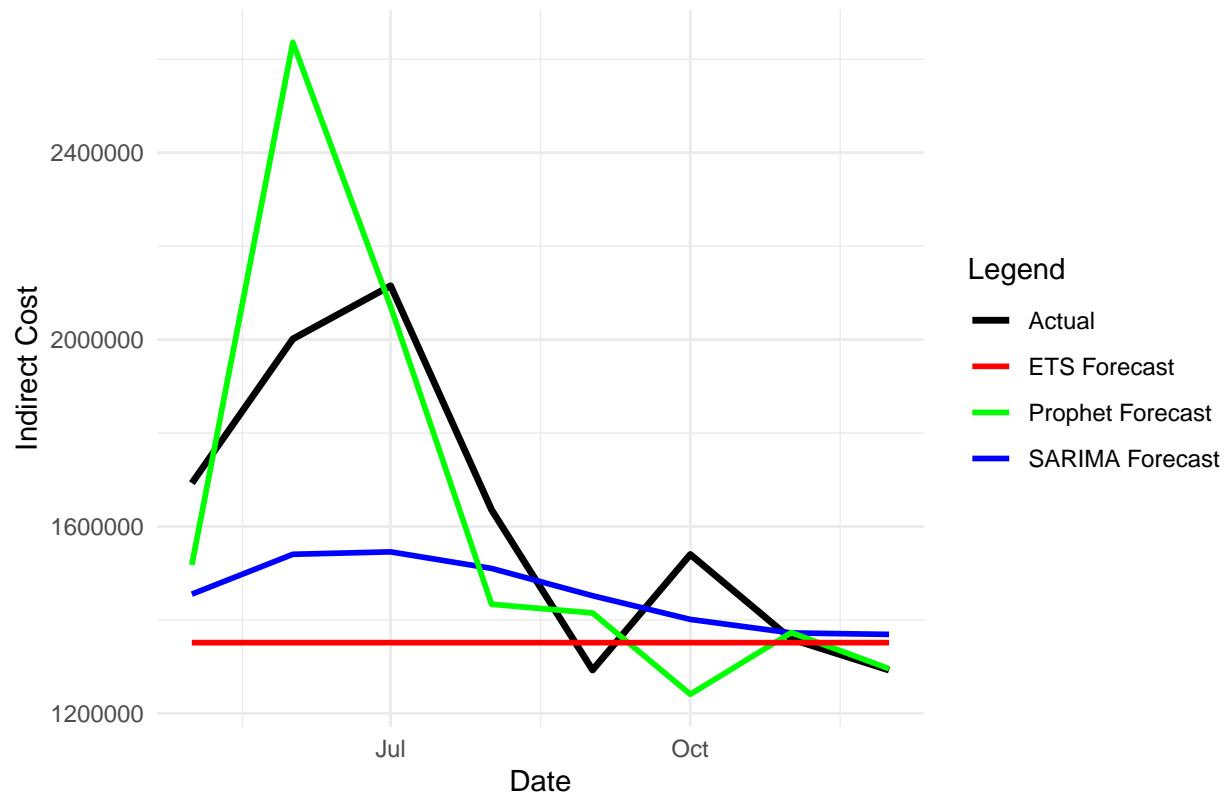


```
## Disabling weekly seasonality. Run prophet with weekly.seasonality=TRUE to override this.
```

```
## Disabling daily seasonality. Run prophet with daily.seasonality=TRUE to override this.
```

```
## [1] "RMSE for ETS: 394658.334431439"
```

## SARIMA vs. Prophet vs. ETS Forecasting Comparison



```
## [1] "RMSE Comparison:"
```

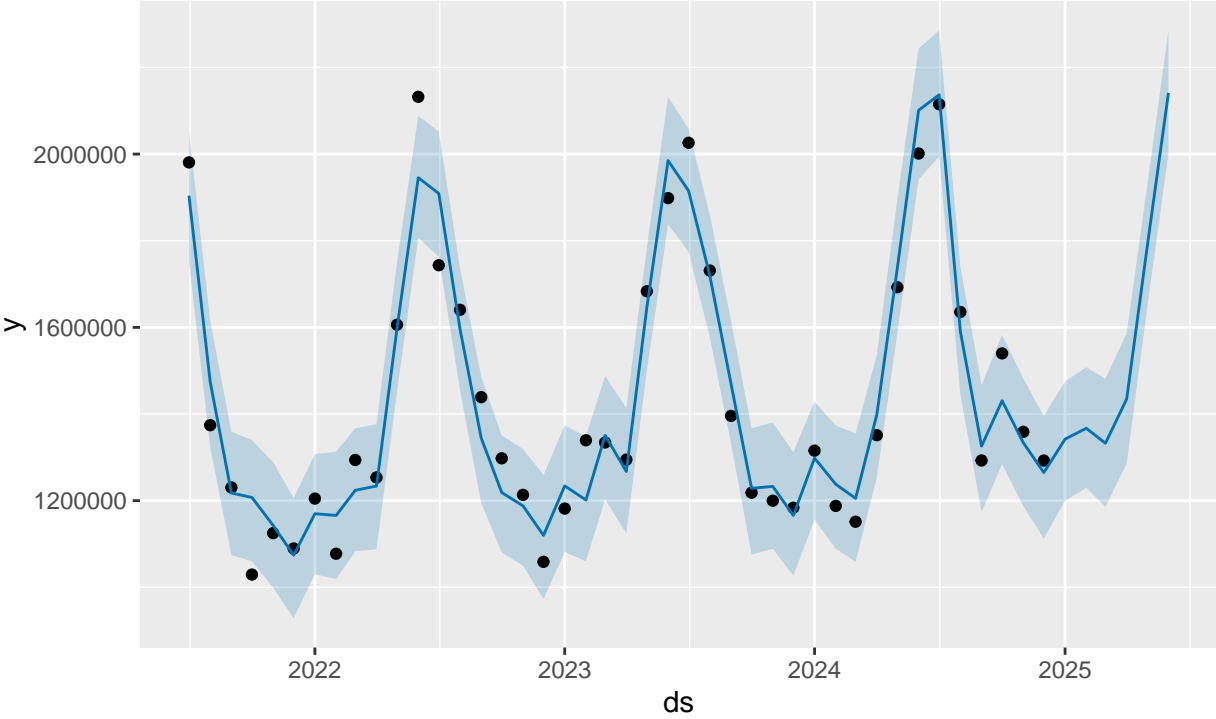
```
##      Model      RMSE
## 1  SARIMA 287116.1
## 2 Prophet 269539.2
## 3     ETS 394658.3
```

```
## [1] "Best Model Based on RMSE: Prophet"
```

```
## Disabling weekly seasonality. Run prophet with weekly.seasonality=TRUE to override this.
```

```
## Disabling daily seasonality. Run prophet with daily.seasonality=TRUE to override this.
```

Forecast for Indirect Cost



##	Date	Forecast	Lower CI (95%)	Upper CI (95%)
## 43	2025-01-01	1342031	1200295	1475218
## 44	2025-02-01	1367055	1229516	1508094
## 45	2025-03-01	1332550	1185772	1481267
## 46	2025-04-01	1434650	1285635	1586300
## 47	2025-05-01	1785946	1645027	1926888
## 48	2025-06-01	2141244	1999987	2285247