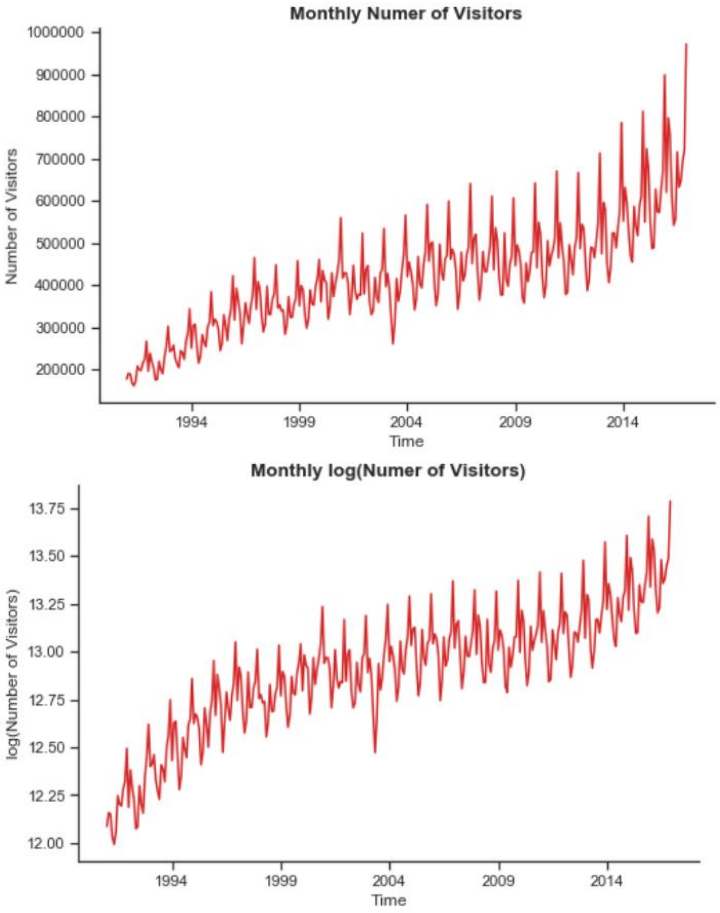
This dataset contains 312 observations for the number of visitors from 1991 to 2016 and there is no missing data. The descriptive statistics show that the mean value of the number of visitors is 419407.372 and 412950.000 respectively, with a minimum value of 161400.000, in May 1991, and a maximum value of 971800.0000, in December 2016.

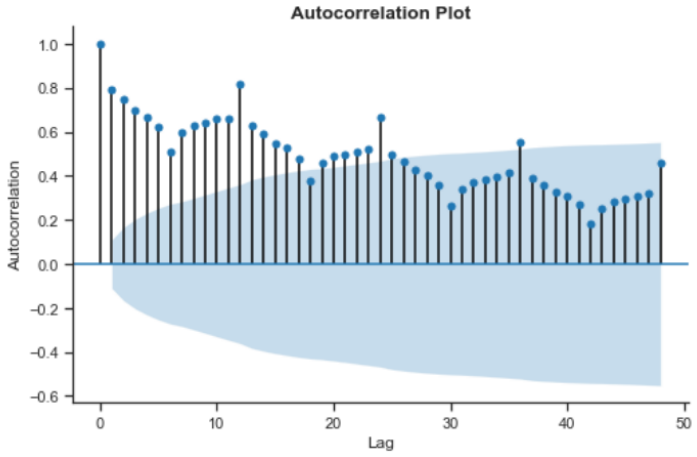
| | Number of visitors |
|---|---|
| Count | 312.000 |
| Mean | 419407.372 |
| STD | 132443.059 |
| Min | 161400.000 |
| 25% | 332625.000 |
| 50% | 412950.000 |
| 75% | 488775.000 |
| Max | 971800.000 |

The time plots below show that the number of visitors has a systematically long-term increasing trend, from 1991 to 2016 and it has a clear pattern of seasonality, however, the seasonal variation is proportional to the trend, indicating that a multiplicative model is more adequate. Also, there is a severe decline in 2003. There is no evidence of cyclic behavior. After log-transformation, the seasonality pattern becomes more uniform, thus an additive model is more adequate for log-number of visitors.

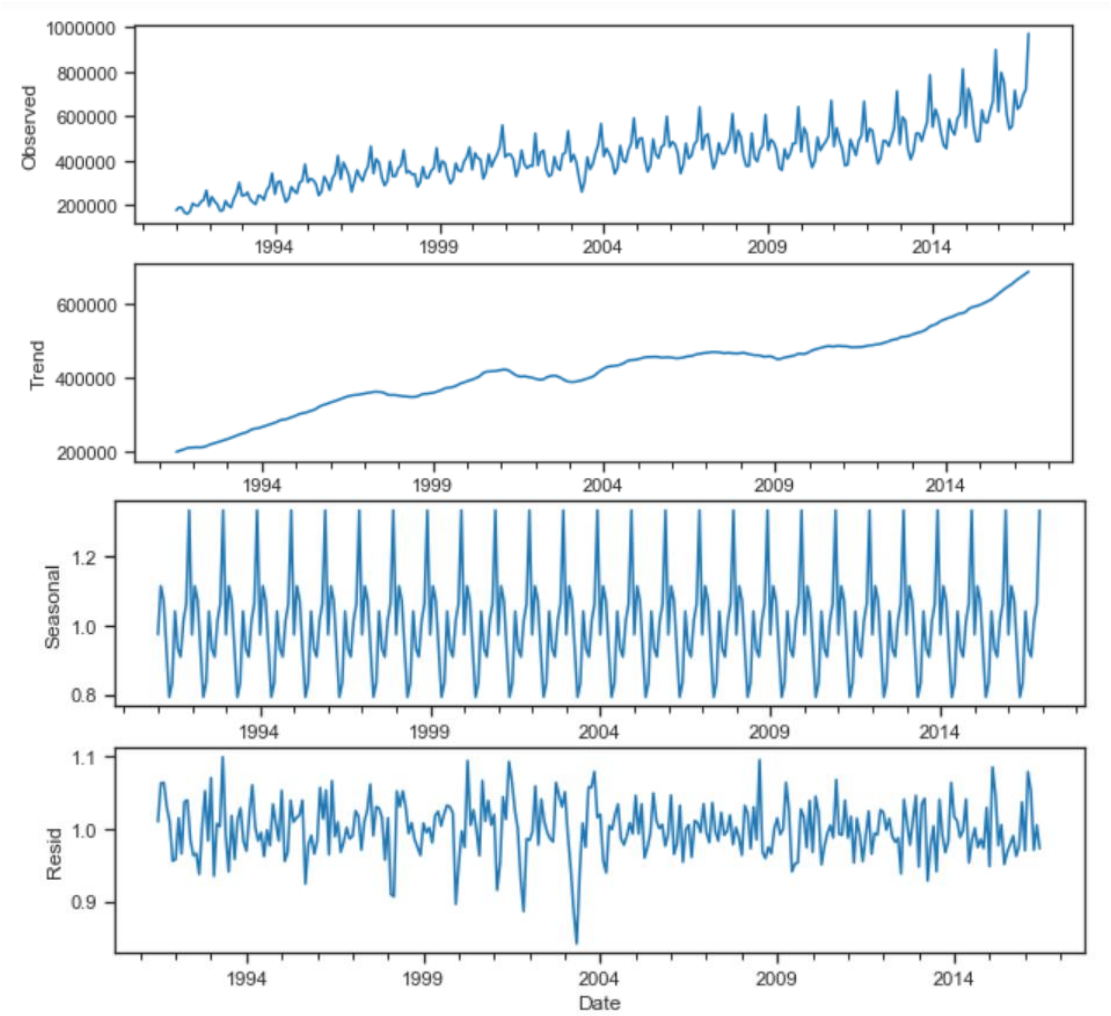



The autocorrelation plot of the number of visitors shows that the autocorrelation becomes

smaller as the lags increase due to the trend.




Based on the discussion above, the multiplicative model is used for the basic decomposition of the time series data. The number of visitors has an upward trend, a seasonal pattern and irregular fluctuations and noises that represent outliers and missing values.



The seasonal plot and subseries plot of the number of visitors indicate that 2016 has the highest number of visitors. Also, there is an increase in the number of visitors from January to February, June to July, November to December, which is consistent with the reality that vacations in different countries are in February, July and December.