**Impact of parameters on Prophet**

# Tutorial parameters

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| --- | --- |
|  | Options  growth(values = c("linear", "logistic"))  changepoint\_num(range = c(0L, 50L), trans = NULL)  changepoint\_range(range = c(0.6, 0.9), trans = NULL)  seasonality\_yearly(values = c(TRUE, FALSE))  seasonality\_weekly(values = c(TRUE, FALSE))  seasonality\_daily(values = c(TRUE, FALSE))  prior\_scale\_changepoints(range = c(-3, 2), trans = log10\_trans())  prior\_scale\_seasonality(range = c(-3, 2), trans = log10\_trans())  prior\_scale\_holidays(range = c(-3, 2), trans = log10\_trans()) |

# Longer forecast phase

|  |  |
| --- | --- |
|  | Same trend and yearly seasonality.  Forecast phase prolonged, as expected.  Asymptotically moving towards cap. |

# Capacity at absolute value

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| --- | --- |
|  | cap = 5.0  Linear trend rather than asymptotic trend  Broadening confidence interval in forecast plot. |

# Capacity at +20%

|  |  |
| --- | --- |
|  | Again asymptotic, but not as quickly as with 5% |

# daily\_seasonality: True

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| --- | --- |
|  | Additional plot on daily fluctuations.  Yearly fluctuations slightly different  Wide range of forecast prices, exceeding cap. |

# “daily\_seasonality: ‘auto’

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| --- | --- |
|  | Same as False again.  Not faster or slower than “auto”. |

# “weekly\_seasonality":True

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| --- | --- |
|  | Weekly fluctuations are merely caused by weekdays (with data) and weekend days (no data).  Forecast does not work.  Setting to “auto” yields the same as True  Conclusion: “auto” is not the general solution! |

# "yearly\_seasonality":False

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| --- | --- |
|  | Yields a smooth forecast.  It is better to drop yearly fluctuations than to add daily and weekly fluctuations |

# seasonality\_mode = ‘additive’

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| --- | --- |
|  | Options are: 'additive' or 'multiplicative'.  No striking differences. |

# "growth": "linear"

|  |  |
| --- | --- |
|  | Meaningless results |

# Extra fluctuations: monthly, quarterly

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| --- | --- |
|  | No extra advantage.  Takes about 3 times longer to calculate. |

# xxx

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# xxx

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# Conclusions

It is important to set all seasonality parameters to True or False

Growth must be set to “linear”.

Setting cap to max + 5% of std is reasonable.