

We've recently made an accessibility improvement to the community and therefore posts without any content are no longer allowed. Please use the spoiler feature or add a short message in the message body in order to submit your weekly challenge.

2022-05-26 Updates: Email: If you're not seeing emails be delivered from the Community, please check your spam and mark the Community emails as not junk. Thank you for your patience.



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## Weekly Challenge

Solve the challenge, share your solution and summit the ranks of our Community!

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### IDEAS WANTED

We're actively looking for ideas on how to improve Weekly Challenges and would love to hear what you think!

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## Challenge #24: ARIMA Time Series



GeneR

Alteryx Alumni (Retired)

For those of you following along, thank you, you can find the solution to last week's challenge (challenge #23) is [HERE](#).

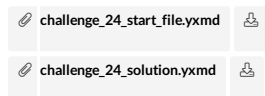
This week's challenge will use the predictive time series tool called [ARIMA](#). If you don't have the predictive tools you can find the installer at <http://downloads.alteryx.com/downloads.html> look for the link to "Predictive tools only". The predictive tools in Alteryx execute the analytics in an open source application called 'R', the advantage of using Alteryx vs. R is that Alteryx provides a straight-forward user interface and eliminates the need to program directly in the R language. If you want to read more about what is happening under the hood, here is a link to the Wiki on ARIMA. [https://en.wikipedia.org/wiki/Autoregressive\\_integrated\\_moving\\_average](https://en.wikipedia.org/wiki/Autoregressive_integrated_moving_average)

The use case: A retailer would like to forecast how many units of a particular product will be purchased from their locations based on a historical trend.

The source data contains weekly data for 2012 and 2013 details how many units have been moved. Some of the data, however, is populated with NULL values. For the NULL values, please assign the monthly average. If the monthly average is also NULL, assign the annual average.

Objective: Forecast the number of units that will be sold in the six weeks following the available data.

Have fun!



Intermediate Join Predictive Analysis Preparation Time Series Transform

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alex

11 - Bolide

I arrived at the same answer, but I'm not sure it's the best answer. Based on the historical data, the forecast doesn't adjust for the drop off in sales each January. How would we configure the tool for a better answer? See spoilers below have the workflow plus what I came up when I exported to Tableau.

▷ Spoiler

This is the data presented in Tableau plus the forecast solution that Tableau provided using the default settings.

▷ Spoiler

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Nice work @alex! Here is Gene's solution (attached and screenshot below):

▷ Spoiler

Tara McCoy


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 **ACE SeanAdams**  
17 - Castor

same solution as @GeneR & @TaraM - just structured slightly differently.


 challenge\_24\_Seansolution.yxmd




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 alexandra\_hanna  
7 - Meteor

Awesome! Forecasting made extremely easy with Alteryx. I've noticed you fed 100 periods into forecast plot and I only did 6, do you know why we still get the same results?

 challenge\_24\_start\_file.yxmd



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 **ACE NicoleJohnson**  
15 - Aurora

My solution! I like these Time Series predictive tools, pretty intuitive (especially for someone who never uses predictive analytics!)

▷ Spoiler

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 **ACE estherb47**  
15 - Aurora

▷ Spoiler


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 Laurap1228  
11 - Bolide

Slightly different to the solution provided

▷ Spoiler

 challenge\_24\_LP.yxmd



**LordNeilLord**  
15 - Aurora

I've not really explored the TS Tools (except TS Filler), I ended up with the same solution as other however, my forecast scores are correct but the confidence scores are slightly out and I can't see why?

» Spoiler

challenge\_24\_LNL.yxmd

**nick\_ceneviva**  
11 - Bolide

Solution attached. Minor differences in the output for the confidence intervals as other people have noted.

challenge\_24\_Ceneviva.yxmd

