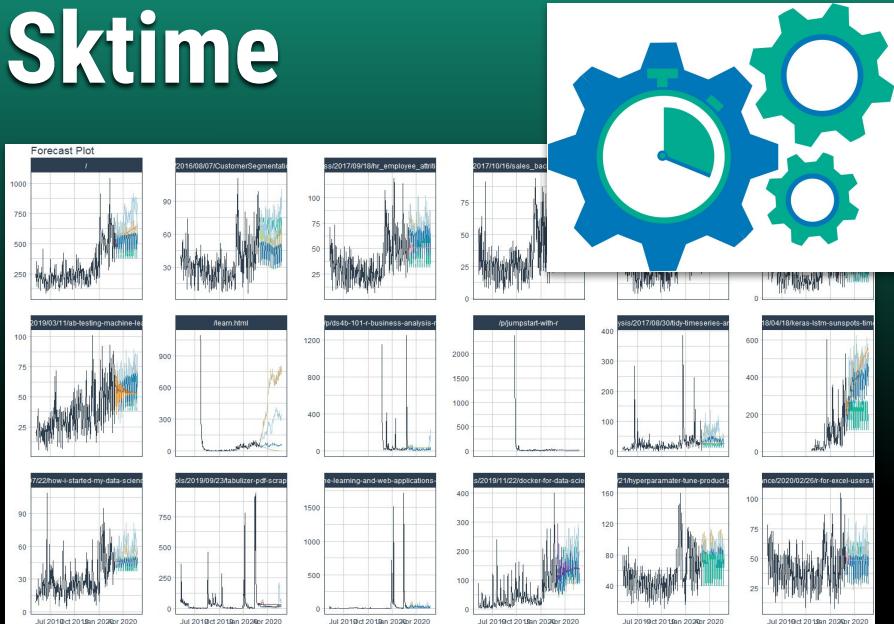


How to Forecast 100 Time Series

3 Pro-Tips | 200 Lines of Code |
Bonus: 100 Time Series

Learning Labs
By Business Science

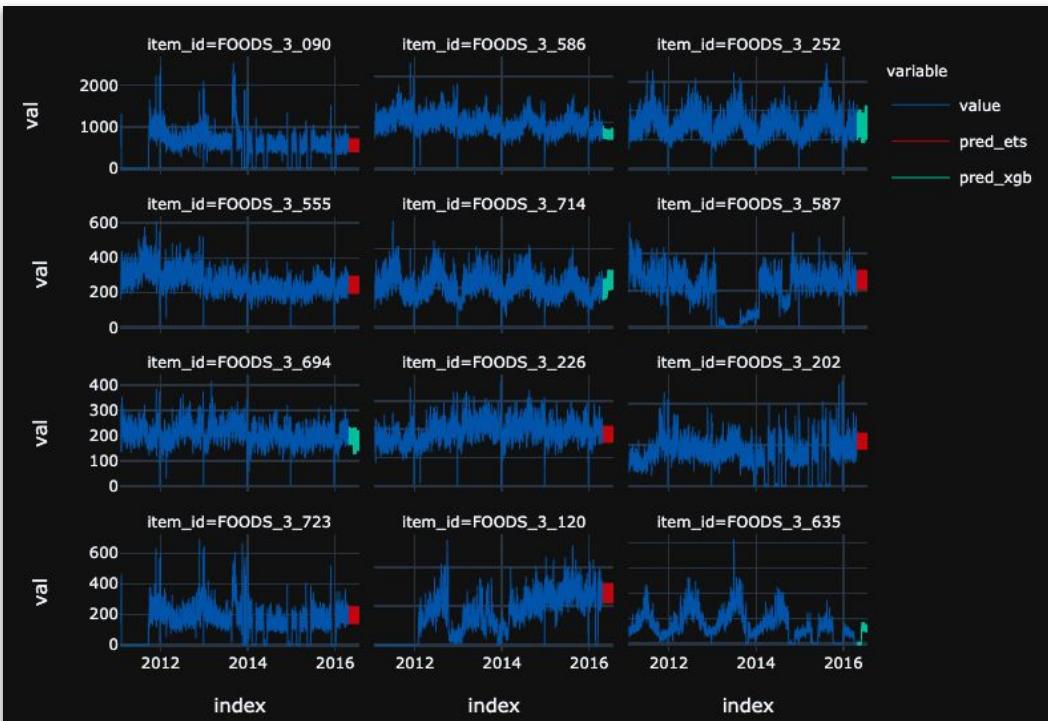
FEATURING: Sktime



Agenda



1. Business Problem
2. 3 Pro Tips for Scaling Forecasts
3. Full Code Tutorial:
Learn my process.
4. Special Offers on
Python Course & R
Time Series Course



Project Workflow



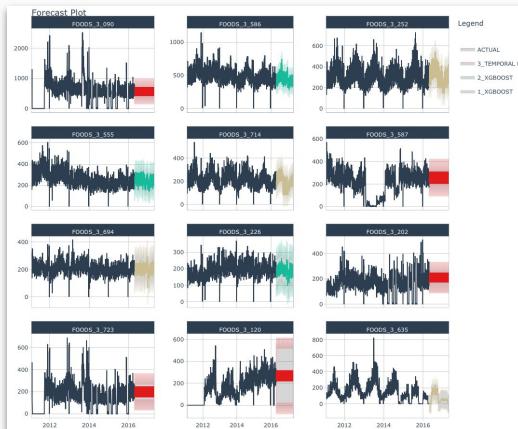
Stage 1 Assess 1



Stage 2 Scale to Many



1





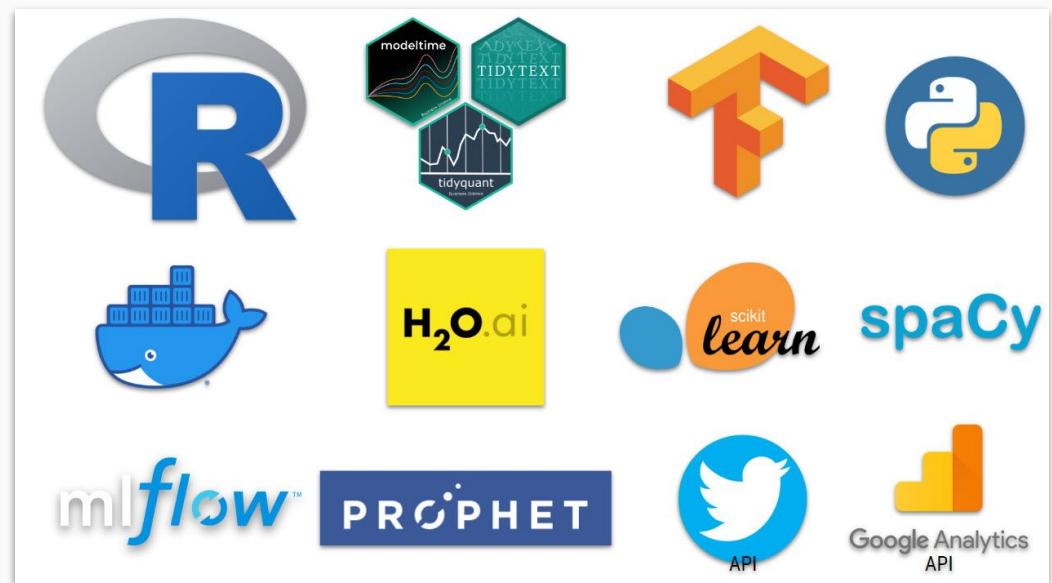
Learning Labs PRO

50+ Labs

1-Hour Courses

100's of Valuable Bonuses

Learn Data Science Accelerate Your Career



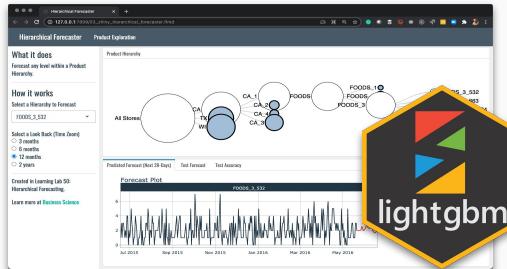
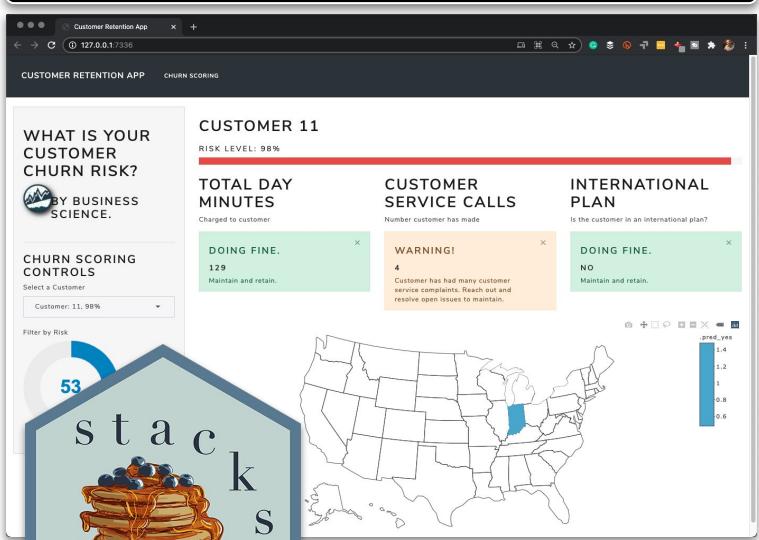
Bonuses for LL PRO Members Today



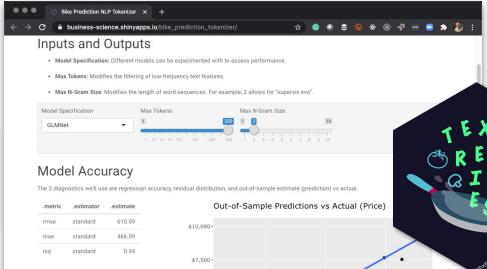
Join LL PRO Today! Get the Shiny & Dash Apps!



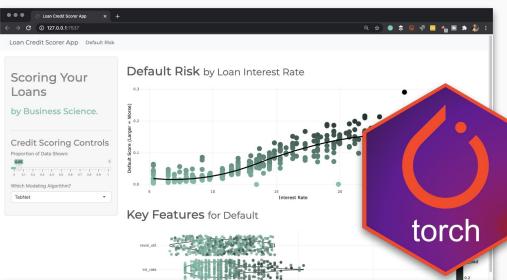
Shiny Customer Retention App



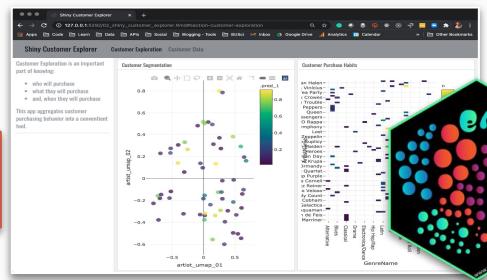
Shiny Hierarchical Forecaster



Shiny NLP Token Automation App



Shiny Loan Default Scorer



Shiny Customer Segmentation App

Bonus Today



- Scalable Forecasting
- Best Model Selection
- Error Logging

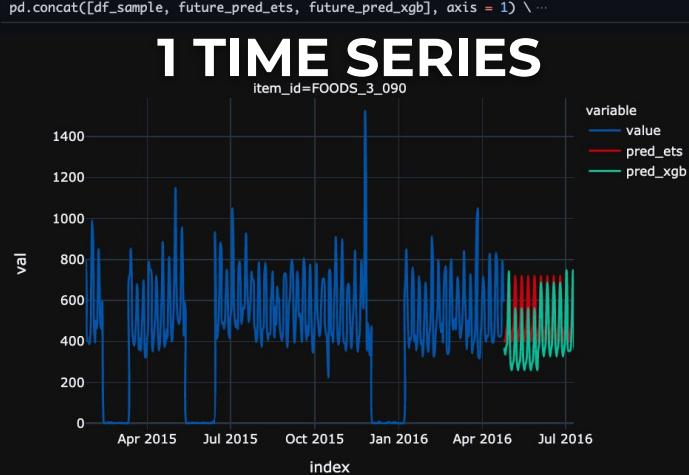


From this

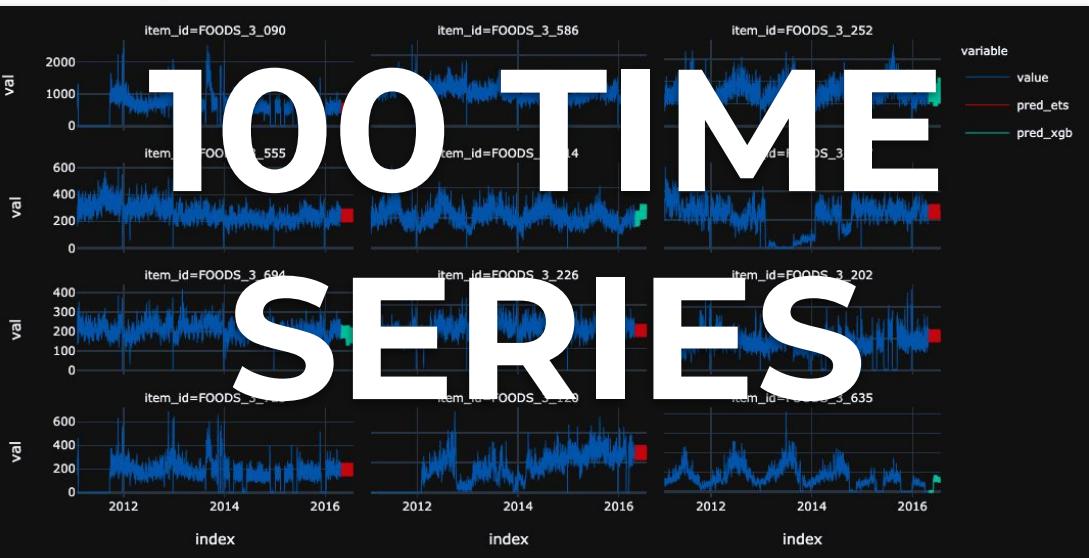


To This!

1 TIME SERIES



100 TIME SERIES



Business Problem

Product Sales Forecasting for Walmart



Walmart: Many products

We're forecasting for Walmart.

Data comes from the M5 Competition.

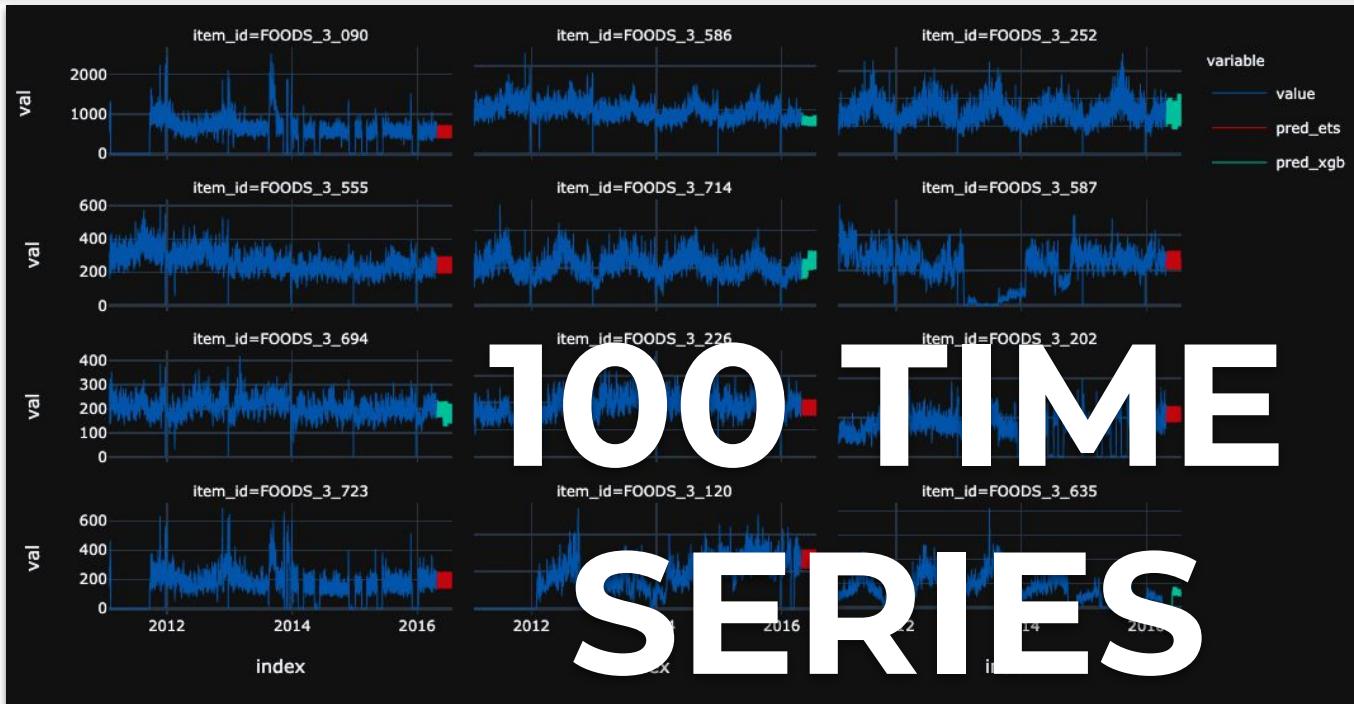
Problem: So. Many. Products.



Walmart carries **thousands** of products.



Solution: What we build today





Tool we're using.

Welcome to sktime

A unified interface for machine learning with time series



Version 0.7.0 out now! Check out the release notes here.

sktime is a library for time series analysis in Python. It provides a unified interface for multiple time series learning tasks. Currently, this includes time series classification, regression, clustering, annotation and forecasting. It comes with time series algorithms and [scikit-learn](#) compatible tools to build, tune and validate time series models.

Overview	
CI/CD	CI build passing CI build running CI build passing codecov 80% CI docs passing
Code	pypi v0.7.0 conda-forge v0.7.0 python 3.6 3.7 3.8 code style black CI launch binder
Community	slack chat discord chat gitter chat Twitter 225 Watch 67k
Citation	DOI 10.5281/zenodo.3749000

<https://www.sktime.org/en/stable/>

3-Pro Tips

When dealing with large scale.



Pro-Tip 1: Start with 1 Time Series

Forecasting 1000's of time series is hard.

- Many Time Series
- Many Models

Simplify your problem.





Pro-Tip 2: Scale Experiments

Going from 1 to 100 is challenging.

Strategy:

- Test Many Models.
- Pick the Best One.
- Repeat.





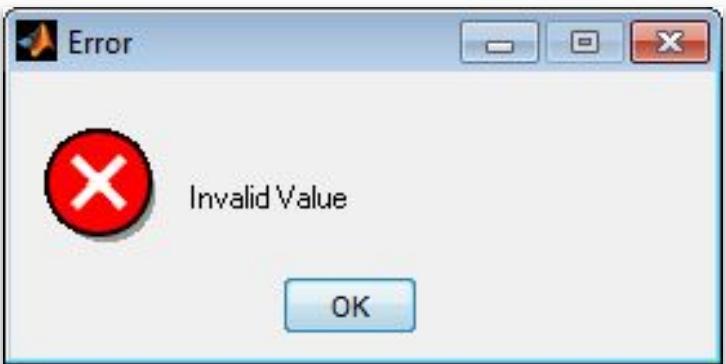
Pro-Tip 3: Anticipate errors.

People don't plan to fail. They fail to plan.

Anticipate that something will go wrong.

Have a plan.

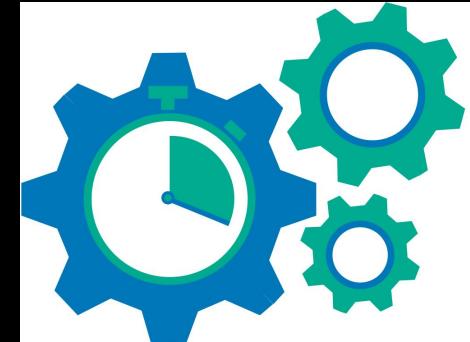
- Implement error reports
- Review all errors



30-Min Demo

Forecasting 100 time series.

Walmart Product Sales



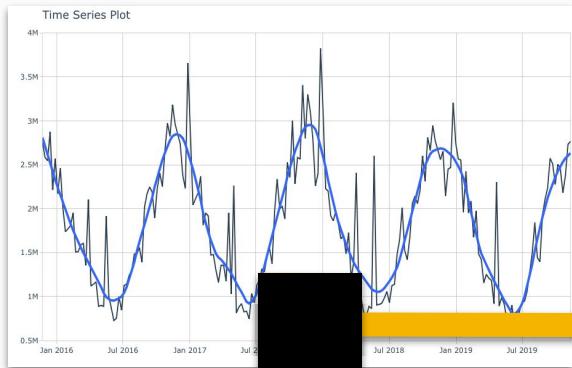
How do I learn what we just did?

Become the Time Series Expert for your organization. 

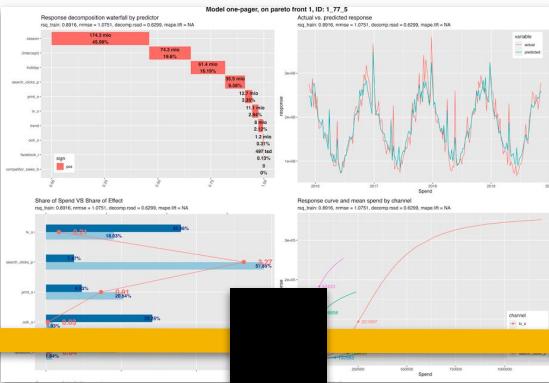
A lot to learn to become a Senior Data Scientist. But not to get started.



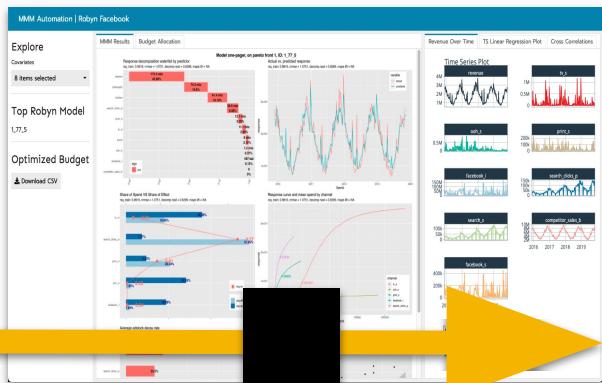
Data Preparation & Visualization



Modeling



Shiny Apps



Career Growth Curve

Learn DS Foundations
(101)

Add Machine Learning
(201 & 203)

Learn Shiny Apps,
Cloud, & Automation
(102 & 202A)

Senior Data Scientist

Data Scientist

Business Analyst



Ricardo Serrano 7:45 PM

Hi @Matt Dancho Just finished DS4B 101-P course module 8. The course experience is fantastic and applicable to different facets of a machine learning project, especially the automation and production implementation phase. While module 9 is released, I will try to implement another time series algorithm (thinking about prophet) and compare the results from AutoARIMA models. Will share code and insights. 🎉



1 reply 2 months ago

*“The Python Course is
fantastic and applicable to
machine learning
projects.”*

-Ricardo Serrano

Author of Reproducible Finance with R
Head of Data & Quantamental Research at Truist Securities

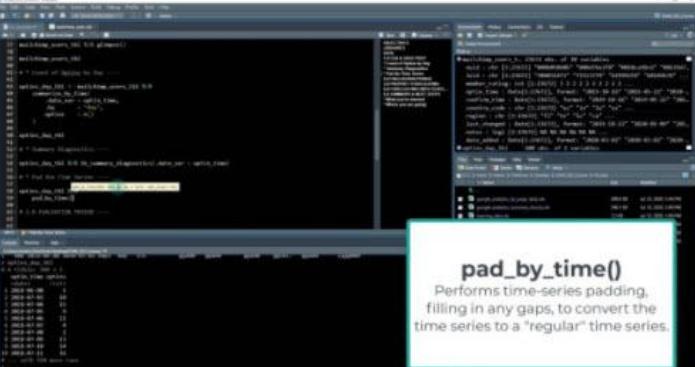


 Jonathan Regenstein • 1st
Head of Data and Quantamental Research at Truist Securities
1d • 

Loving the new High Performance Time Series course (<https://lnkd.in/dfaBCTJ>) from Matt Dancho.

I'm only about 10% through the material and already picked up a couple super useful new moves like the one below - pad_by_time!

#rstats #rstudio #python #forecasting



pad_by_time()
Performs time-series padding, filling in any gaps, to convert the time series to a "regular" time series.

103 + 10 Comments

Reactions



+95

 Love  Comment  Share  Send

"I'm only 10% through and I already picked up a couple super useful new moves."

-Jonathan Regenstein

Author of Reproducible Finance with R
Head of Data & Quantamental Research at Truist Securities



Thursday, August 5th ▾



Chris Selig 1:19 PM

Hey folks, just wanted to let you know that because of all the R courses [@Matt Dancho](#) has provided, I landed my first Data Scientist role at a global energy company.

Setting up shiny dashboards in AWS was extremely helpful during my interview as the people interviewing me were looking for someone that has some knowledge of cloud technologies. Even though I haven't finished the python course yet, that was also a huge boost because although where I'm going is an R company, there are some python people that I'm to help support. I ticked off ALOT of the boxes for the person they were looking for.

Thanks Matt!

P.S. Although I haven't gotten around to updating my LinkedIn yet, feel free to add me!
<https://www.linkedin.com/in/chris-selig/>



 3 replies Last reply 6 days ago

*“Because of the **R courses** Matt has provided, I landed my **first Data Scientist Role.**”*

-Chris Selig

Brand New Data Scientist!

CNOOC International | Global Energy Company

Leo Timmermans 7:17 AM

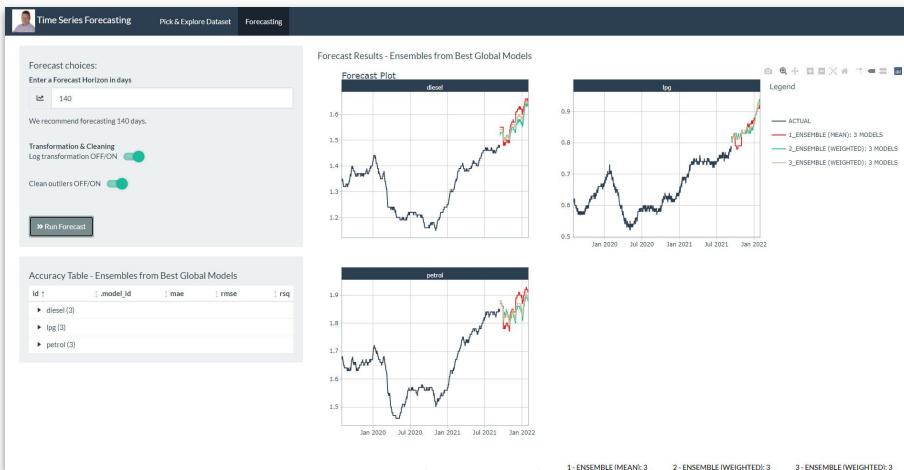
Hi everybody,

Been working on a time series forecasting shiny app, which is a bit like Matt's Nostrodamus app (<https://business-science.shinyapps.io/nostradamus/>) from Learning Lab 46.

This app, the time series course and the shiny courses were my inspiration.

You can find the result here: https://leotimmermans.shinyapps.io/time_series/

I will be adding this to my portfolio shiny app: <https://portfolio.leotimmermans.nl/>



“The time series courses and shiny courses were my inspiration”

-**Leo Timmermans**
Data Scientist
OTTO Work Force



The Transformation

Got a DS Job!



Masatake Hirono landed a job at a top Management Consulting Firm.

[Learn More](#)

Got a Senior DS Role!



Z. Du applied used data science to improve patient care while reducing costs.

[Learn More](#)

Got 3 raises in 1-year



Mohana Chittoor got a 40% raise with data science.

[Learn More](#)

Built 1st shiny app in 3-months



Herb went from no experience to deploying his first app in 3 months

[Learn More](#)

Won the 2020 shiny competition

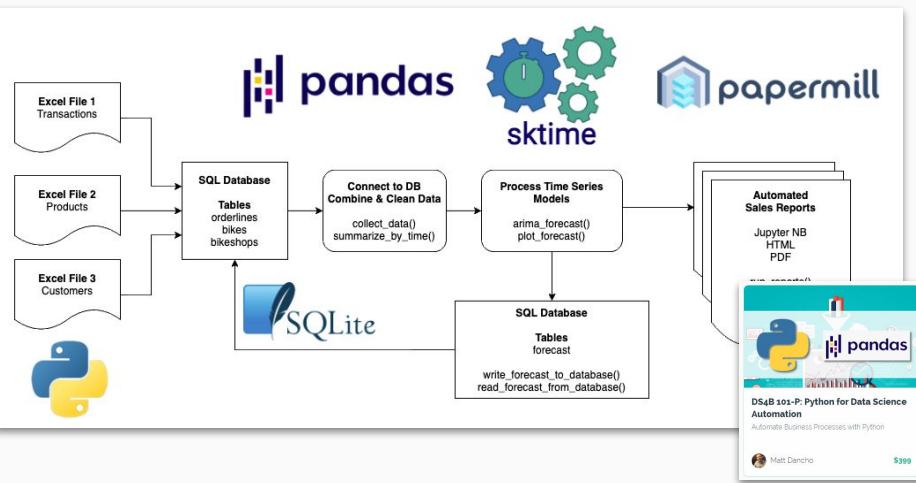


Raj used his new Shiny experience to win top 5 of a Competition.

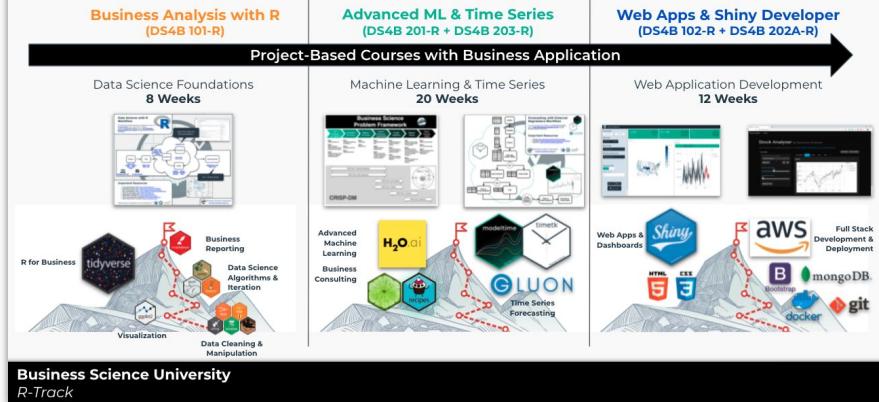
[Learn More](#)



Two Systems: 1 Result



R-TRACK NEW 5-Course R-Track System

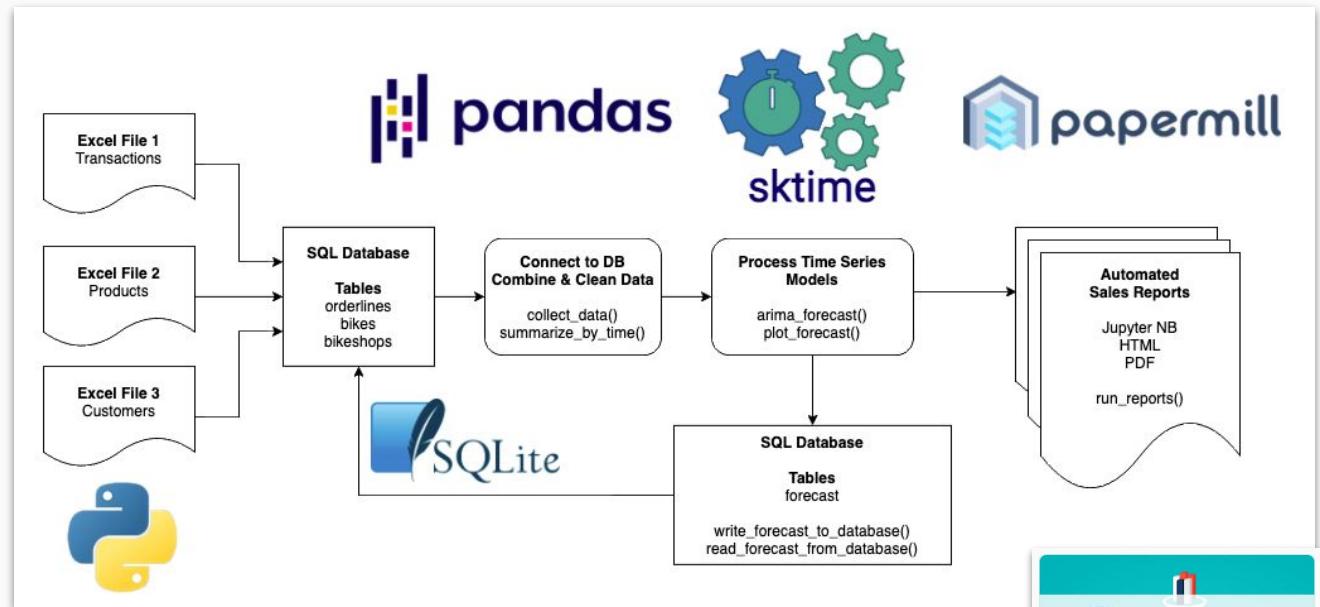


DS4B 101-P: Python for Data Science Automation Course



Designed for Beginners

- Pandas & Numpy
- Visualization
- SQL Databases
- Intro to Sktime
- Reporting
- Building Libraries
- Automation





NEW 5-Course R-Track System



Business Analysis with R (DS4B 101-R)

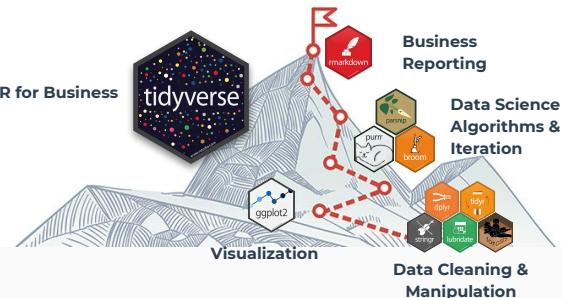
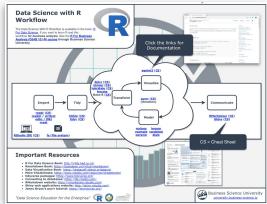
Advanced ML & Time Series (DS4B 201-R + DS4B 203-R)

Web Apps & Shiny Developer
(DS4B 102-R + DS4B 202A-R)

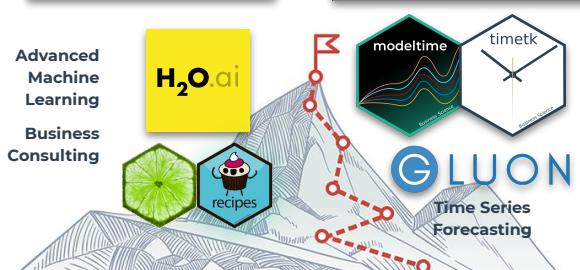
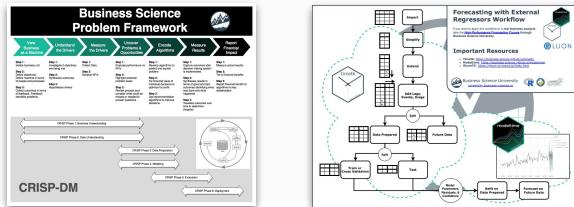
Project-Based Courses with Business Application

Data Science Foundations

8 Weeks

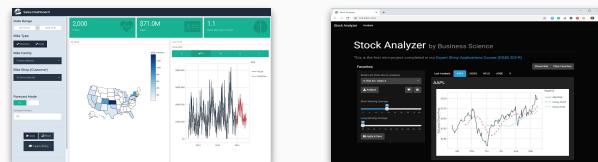


Machine Learning & Time Series **20 Weeks**

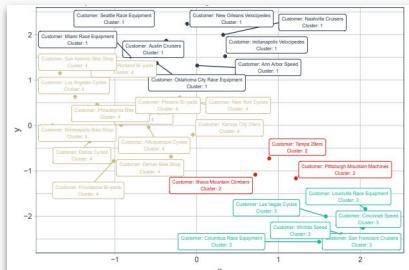


Web Application Development

12 Weeks

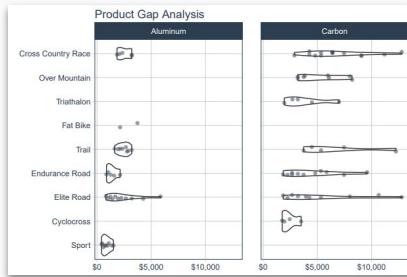


You complete 8 End-To-End Projects.



Customer Segmentation

DS4B 101-R



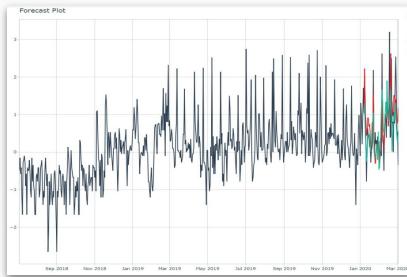
Product Price Prediction

DS4B 101-R



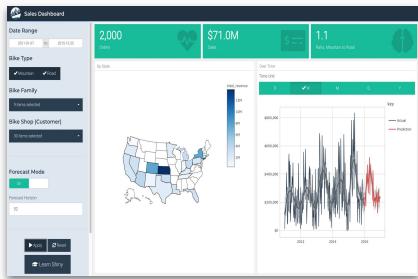
Churn Prediction

DS4B 201-R



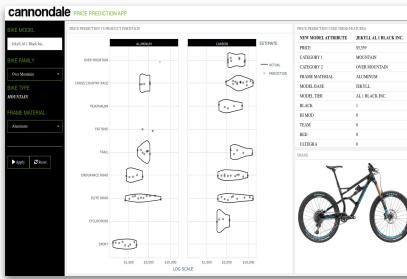
Demand Forecasting

DS4B 203-R



Demand Forecast App

DS4B 102-R



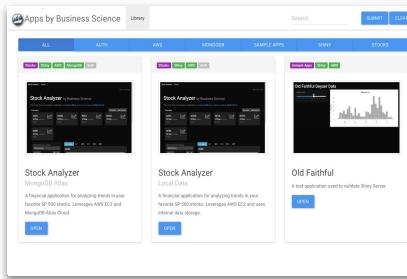
Product Price Recommender App

DS4B 102-R



Stock Analyzer App

DS4B 202A-R



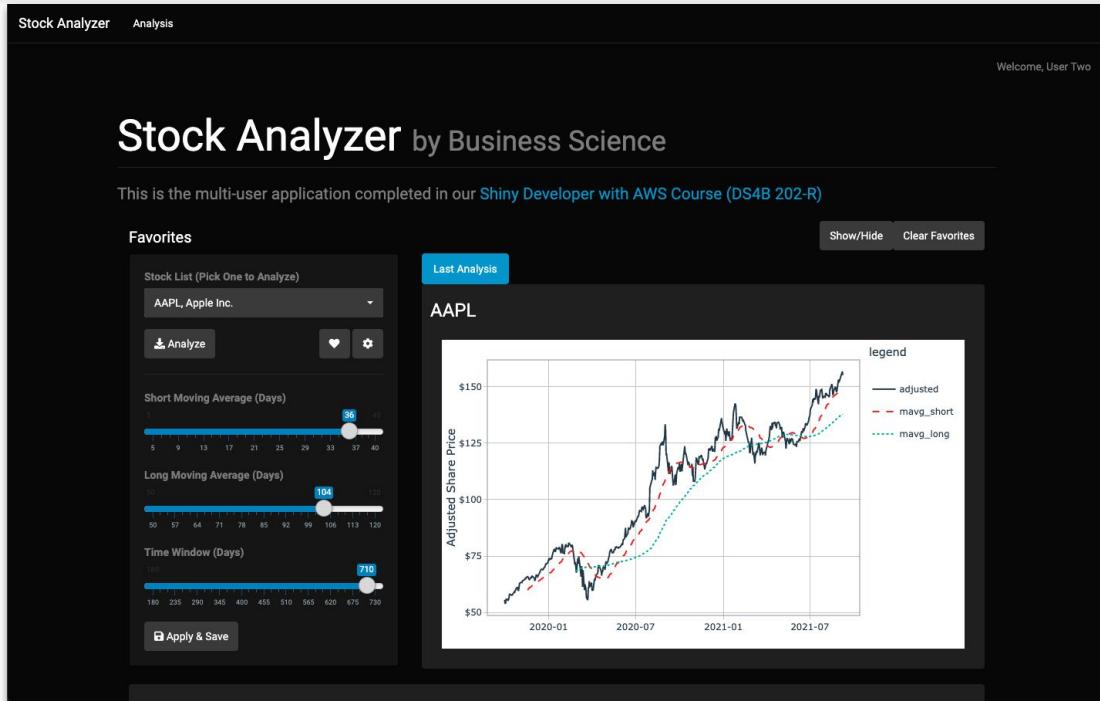
Application Library

DS4B 202A-R



What you build.

1 of 8 projects





Summary: What's inside

1000+ Videos

130+ Hours of Content

8 End-to-End projects

Private Community Mentorship

Lifetime Access

30-Day Money Back Guarantee

\$5,000 value

The screenshot displays the R-Track system interface. On the left, there's a promotional banner for the "NEW 5-Course R-Track System" featuring courses like "Business Analysis with R (DS4B 101-R)" and "Advanced Machine Learning for Business". Below this is a diagram of the "Data Science Foundations" program, which spans 8 weeks and includes modules such as "R for Business", "R tidyverse", "Business Reporting", "Data Cleaning & Manipulation", "Machine Learning", and "Business Consulting". On the right, a forum thread titled "BSU DS4B R Tra..." is shown, with a post from Matt Dancho asking about zero variance features in R. Adam responds with a detailed explanation involving `map_dfc()`, `gather()`, and `filter()` functions. Other users like Matt and Adam are also visible in the conversation.

15% OFF PROMO Code: LEARNINGLABS



~~\$1,000+~~ value

~~\$399~~

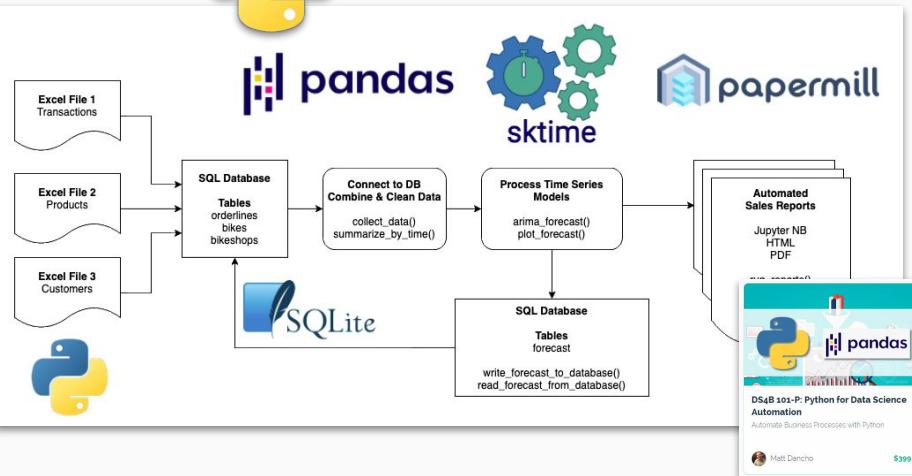
~~\$339~~



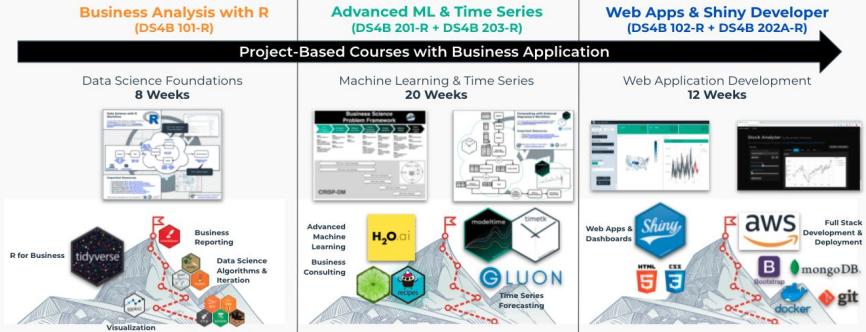
~~\$5,000+~~ value

~~\$1999~~

~~\$1699~~



NEW 5-Course R-Track System



Career acceleration awaits

university.business-science.io

