Bonus Assignment #2

This is a Bonus Assignment and you are NOT required to work on it.

Assignment Due Date: 5/1/20 by 11:59pm

Assignment Submission:

Submit your assignment as a SINGLE ZIP file on Blackboard by the due date

Deliverables:

Your ZIP file for the assignment submission must include the following:

- All source code that you wrote, compiled and built on your personal computer.
- Screencast-o-matic (https://screencast-o-matic.com/) video recording of a live run of your code on your personal development computer.

Requirements specification:

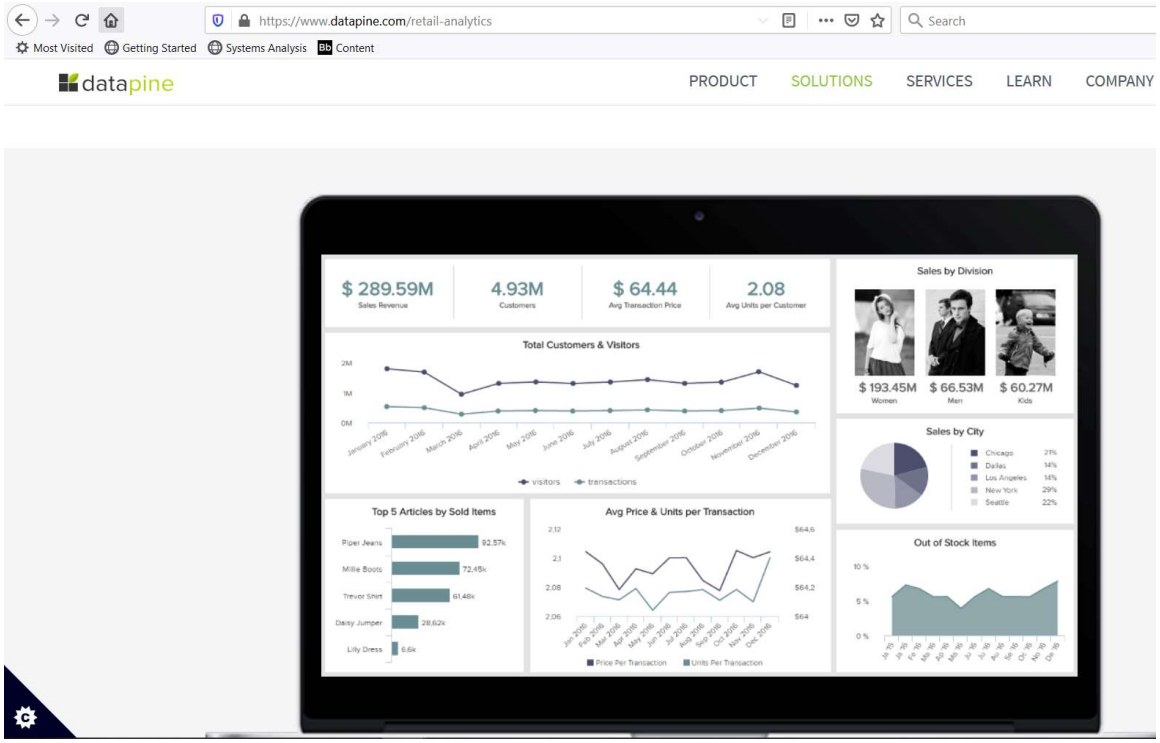
Create a dashboard (See an example in Appendix A) using Angular/Javascript that allows the user to plot data in charts and make time series forecasts using the Superstore dataset provided to achieve the following:

1. The user shall be able to view, chart, and map orders based on: Category, state, country, city, Segment, product, etc.
2. Create stacked bar chart for products Segment per category
3. Display Sales Revenue, Number of Customers , Avg Transaction Value
4. The Avg Price & Units per Transaction per month/year
5. Top 5 sold items by city
6. Top 5 total sales
7. Plot the total number of orders per State on **Choropleth map**
8. Plot the total number of orders per Country on **Choropleth map**
9. Plot (chart) the predicted sales and real sales of the time series with forecasts – statsmodel ARIMA
10. Plot (chart) the predicted sales and real sales of the time series forecasts – Using TensorFlow.js Recurrent Neural Network with LSTM Cells

Consider the following sources in your design and development:

1. https://www.codeproject.com/Articles/1265477/TensorFlow-js-Predicting-Time-Series-Using-Recurre
2. https://www.curiousily.com/posts/time-series-forecasting-with-lstms-using-tensorflow-2-and-keras-in-python/
3. https://www.analyticsvidhya.com/blog/2018/02/time-series-forecasting-methods/
4. https://plotly.com/javascript/time-series/
5. https://towardsdatascience.com/time-series-forecasting-with-tensorflow-js-1efd48ff2201
6. https://www.npmjs.com/package/timeseries-analysis
7. https://www.tensorflow.org/tutorials/structured_data/time_series
8. https://www.tensorflow.org/js
9. https://plotly.com/javascript/choropleth-maps/
10. https://www.datapine.com/dashboard-examples-and-templates/retail

Appendix A


https://www.datapine.com/retail-analytics
Search
Most Visited
Getting Started
Systems Analysis
Content
datapine
PRODUCT
SOLUTIONS
SERVICES
LEARN
COMPANY
$ 289.59M
Sales Revenue
4.93M
Customers
$ 64.44
Avg Transaction Price
2.08
Avg Units per Customer
Total Customers & Visitors
visitors
transactions
Sales by Division
$ 193.45M
Women
$ 66.53M
Men
$ 60.27M
Kids
Sales by City
Chicago
Dallas
Los Angeles
New York
Seattle
Top 5 Articles by Sold Items
Piper Jeans
Millie Boots
Trevor Shirt
Daisy Jumper
Lily Dress
Avg Price & Units per Transaction
Price Per Transaction
Units Per Transaction
Out of Stock Items