



# THE LIQUOR PREDICTOR

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IOWA VODKA SALES

Created by Leah Nagy

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## Iowa - A Liquor Control State

- The Alcoholic Beverages Division (ABD) controls the sale and distribution of alcohol.
- ABD purchases liquor from the manufacturer and sells it to the retailer.





# PROJECT GOAL

Create a web & mobile application  
to analyze past Vodka sales in  
Iowa and forecast future sales  
predictions

# PROJECT GOAL

Transform this  
raw data

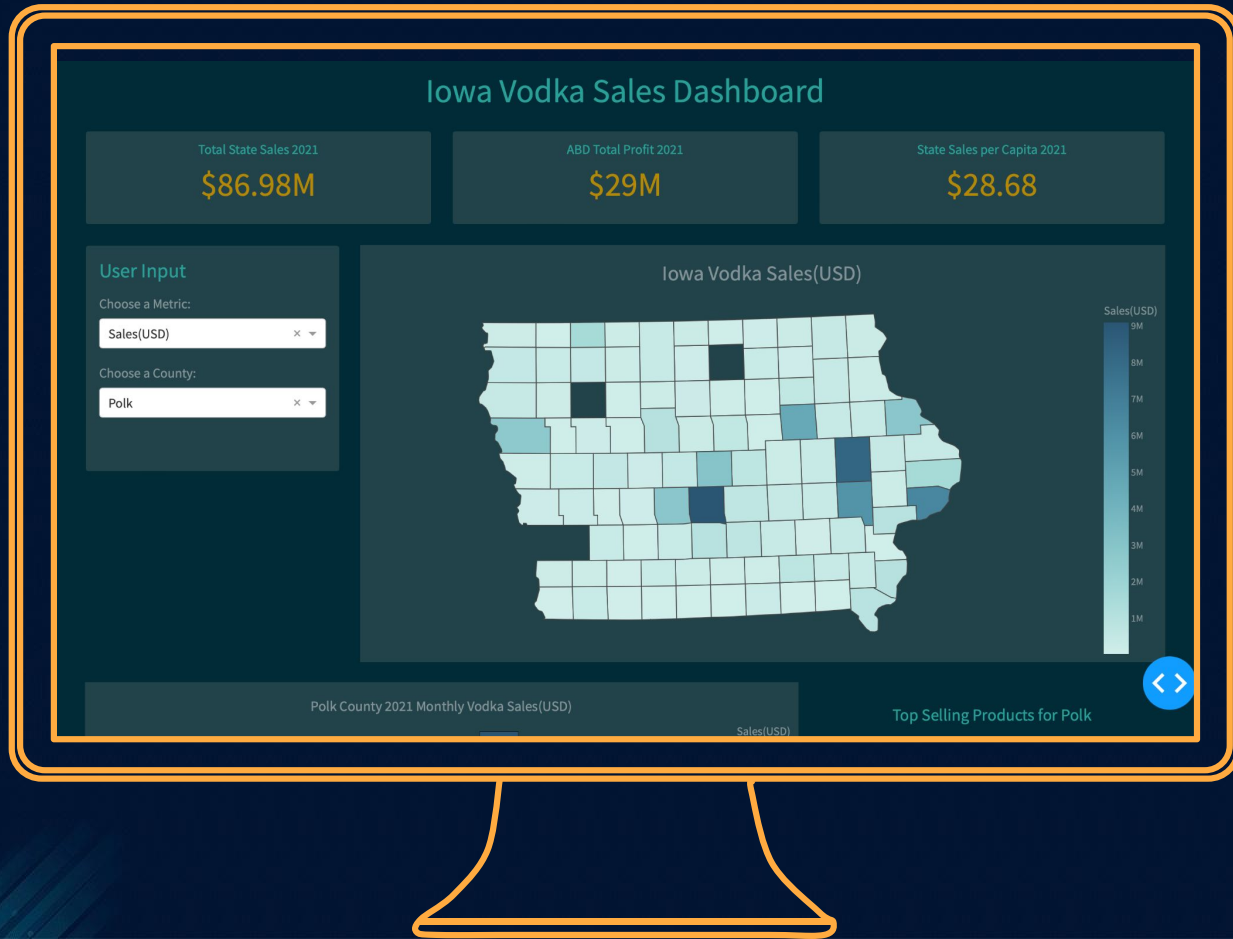


1	S12000300003	06-14	4270	Wj's Liquor	ST	LAKE MILLS	50450	Winnebago	1002300.0	RUM	...	12	1000
2	S17184100003	2014-02-03	3700	Avoca Liquor	158 SOUTH ELM	AVOCA	51521	Pottawattamie	1011300.0	TENNESSEE WHISKIES	...	12	1000
3	S29002600016	2015-11-11	3894	Smokin' Joe's #6 Tobacco and Liquor	1404 1ST AVE NE	CEDAR RAPIDS	52402	Linn	1081600.0	WHISKEY LIQUEUR	...	24	375
4	S25312900004	2015-04-28	3742	Wal-Mart 1625 / Lemars	1111 HOLTON DR	LEMARS	51031	Plymouth	1081600.0	WHISKEY LIQUEUR	...	12	750
5	S10040300190	2013-01-15	2616	Hy-Vee Food and Drug / Clinton	901 SOUTH 4TH ST	CLINTON	52732	Clinton	1081340.0	ROOT BEER SCHNAPPS	...	12	750
6	S26086200016	2015-06-09	4559	Osage Payless Foods	633, CHASE ST	OSAGE	50461	Mitchell	1081330.0	PEACH SCHNAPPS	...	12	750
7	S06200700032	2012-06-21	2568	Hy-Vee Food Store #4 / Cedar Rapids	1556 FIRST AVENUE NE	CEDAR RAPIDS	52402	Linn	1011100.0	BLENDED WHISKIES	...	12	750
8	S28164600008	2015-09-29	4732	Walgreens #07967 / Clive	15601 HICKMAN RD	CLIVE	50325	Polk	1032200.0	IMPORTED VODKA - MISC	...	12	750
9	S10306000026	2013-01-29	3962	Durant Street Country Stop	618 DURANT ST	HARLAN	51537	Shelby	1081390.0	IMPORTED SCHNAPPS	...	12	500
10	S26589700062	2015-07-06	2549	Hy-Vee Food Store / Indianola	910 N JEFFERSON	INDIANOLA	50125	Warren	1031080.0	VODKA 80 PROOF	...	6	1750
11	S12106600050	2013-05-08	2661	Hy-Vee Food Store / Sheldon	1989 PARK ST	SHELDON	51201	O'Brien	1081390.0	IMPORTED SCHNAPPS	...	12	750

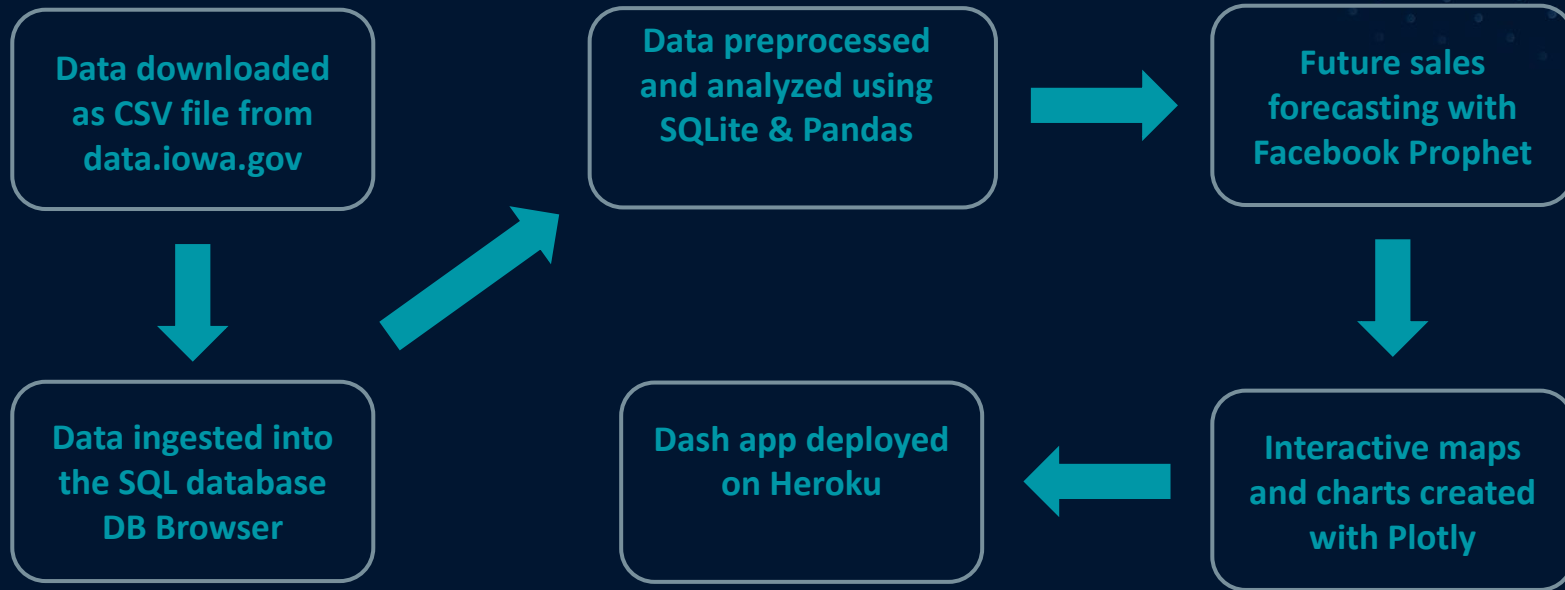


# PROJECT GOAL

Into a useful  
application



# Data Pipeline



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# DATA

- Data obtained from iowa.gov
- Filtered data:
  - Vodka sales
  - Years 2018 - 2022
- Rows: 5M+ transactions
- Features: 24



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# WEB & MOBILE APPLICATION



## PLOTLY

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Make charts and  
choropleth map



## DASH

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Create app layout



## HEROKU

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Deploy app



# DASH APP

User Input:  
Metric &  
Location

County  
monthly sales  
for 2021

Try the app  
yourself!

[https://bit.ly/  
3RzWTNi](https://bit.ly/3RzWTNi)

## Iowa Vodka Sales Dashboard

Total State Sales 2021

\$86.98M

ABD Total Profit 2021

\$29M

State Sales per Capita 2021

\$28.68

### User Input

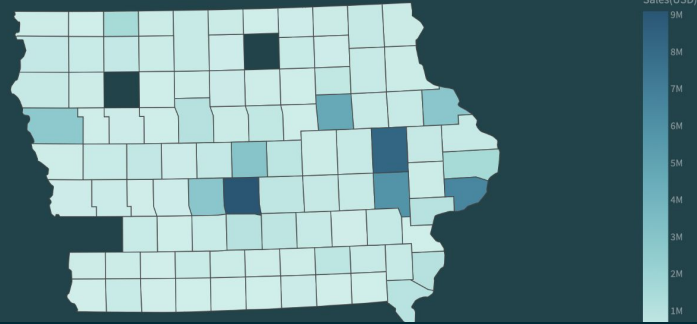
Choose a Metric:

Sales(USD) x

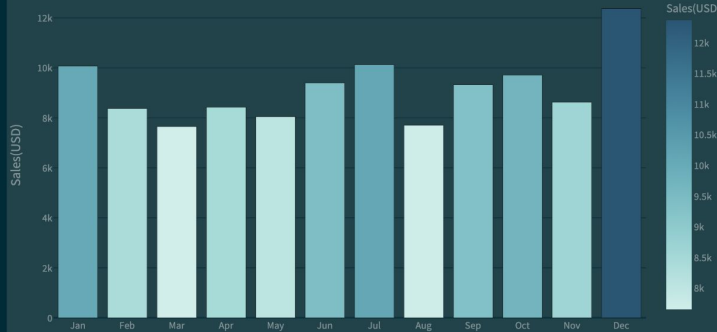
Choose a County:

Adair x

### Iowa Vodka Sales(USD)



### Adair County 2021 Monthly Vodka Sales(USD)



### Top Selling Products for Adair

Product Name	Sales(USD)
Titos Handmade Vodka	32154.45
Hawkeye Vodka	12950.82
Smirnoff 80prf	8269.94
Absolut Swedish Vodka 80prf	5754.49
McCormick 80prf Vodka PET	5744.76

State-level  
sales insights

Iowa  
choropleth  
map of county  
sales

Top selling  
products for  
chosen county

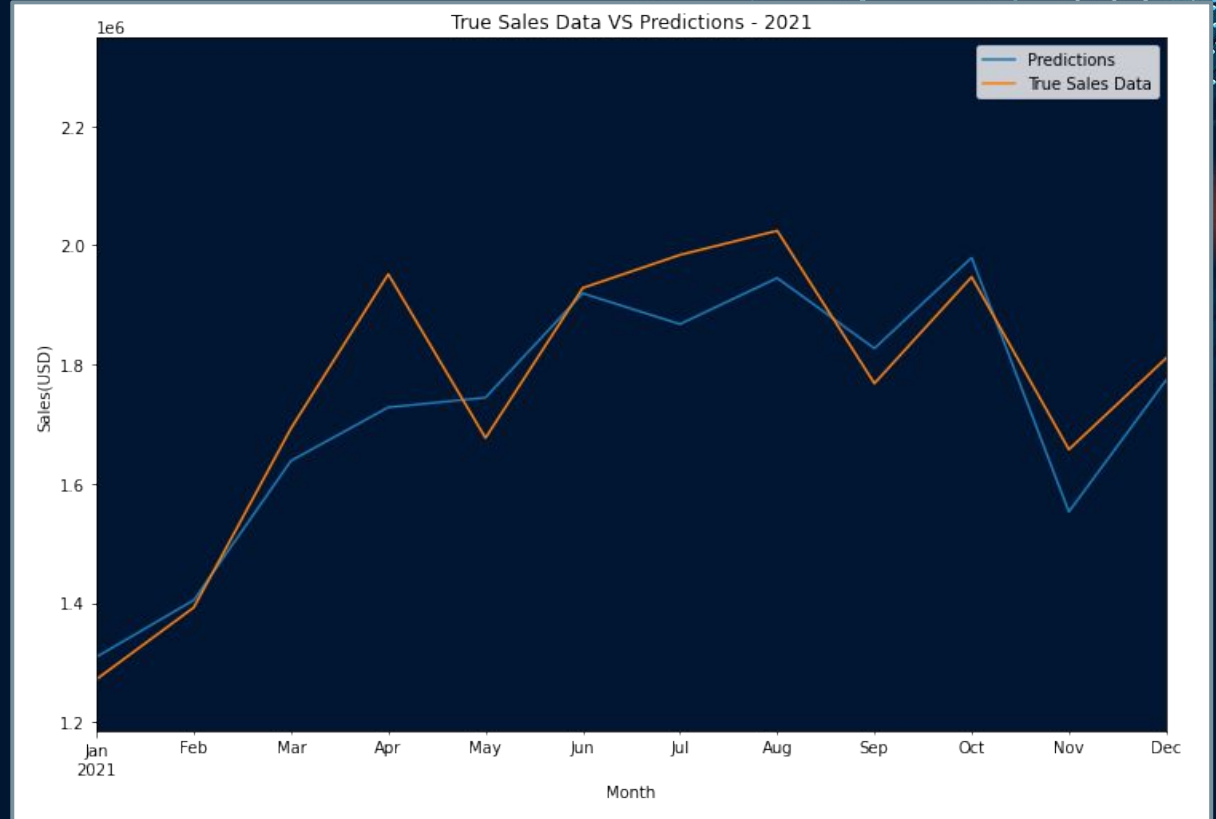
# Sales Forecasting with Facebook Prophet

## TRAINING DATA

Polk County Vodka  
Sales (2018-2020)

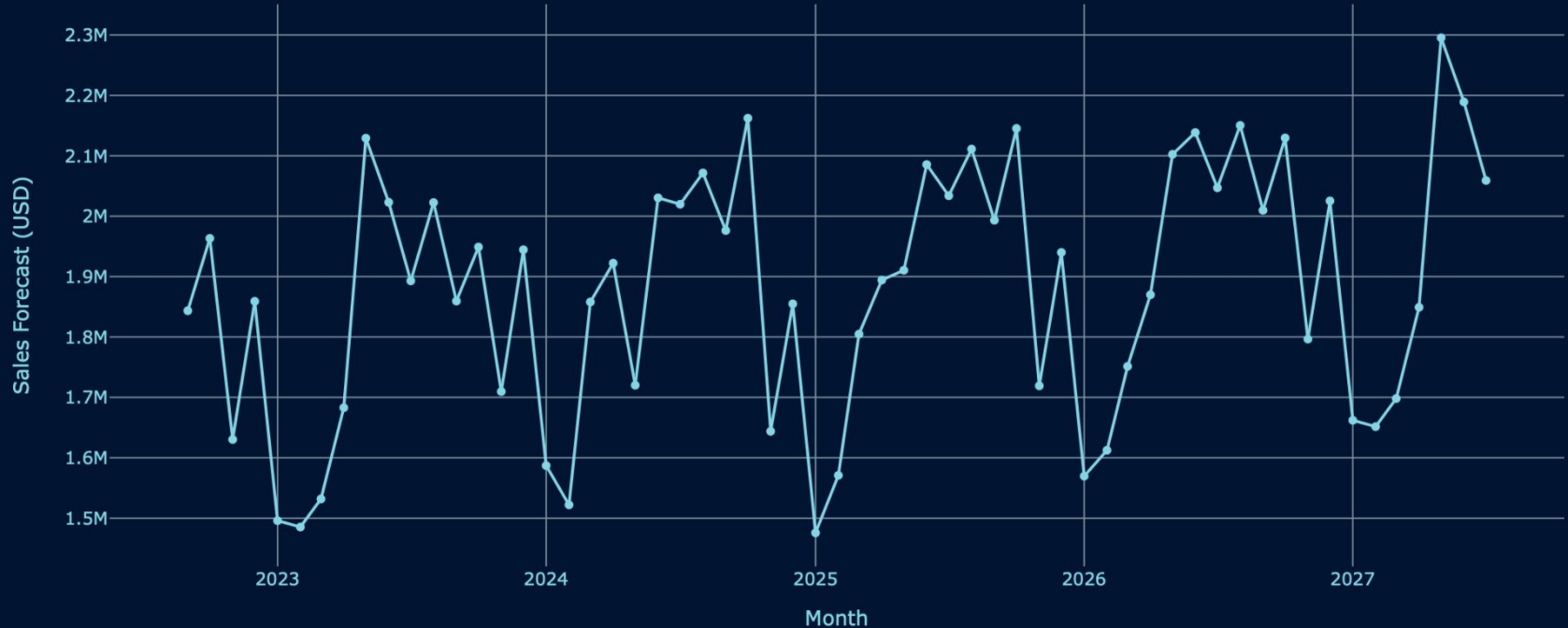
## TESTING DATA

Polk County Vodka  
Sales (2021)



# Sales Forecasting with Facebook Prophet

Future Sales Forecast Polk County, Iowa



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## NEXT STEPS



### FORECAST

Add FB Prophet forecasting to app



### ALL LIQUORS

Include all products sold



### API

Connect to API to automatically update data



### FILTERS

Allow more user inputs to filter data, i.e. - by city or brand

# THANKS!

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Do you have any questions?  
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