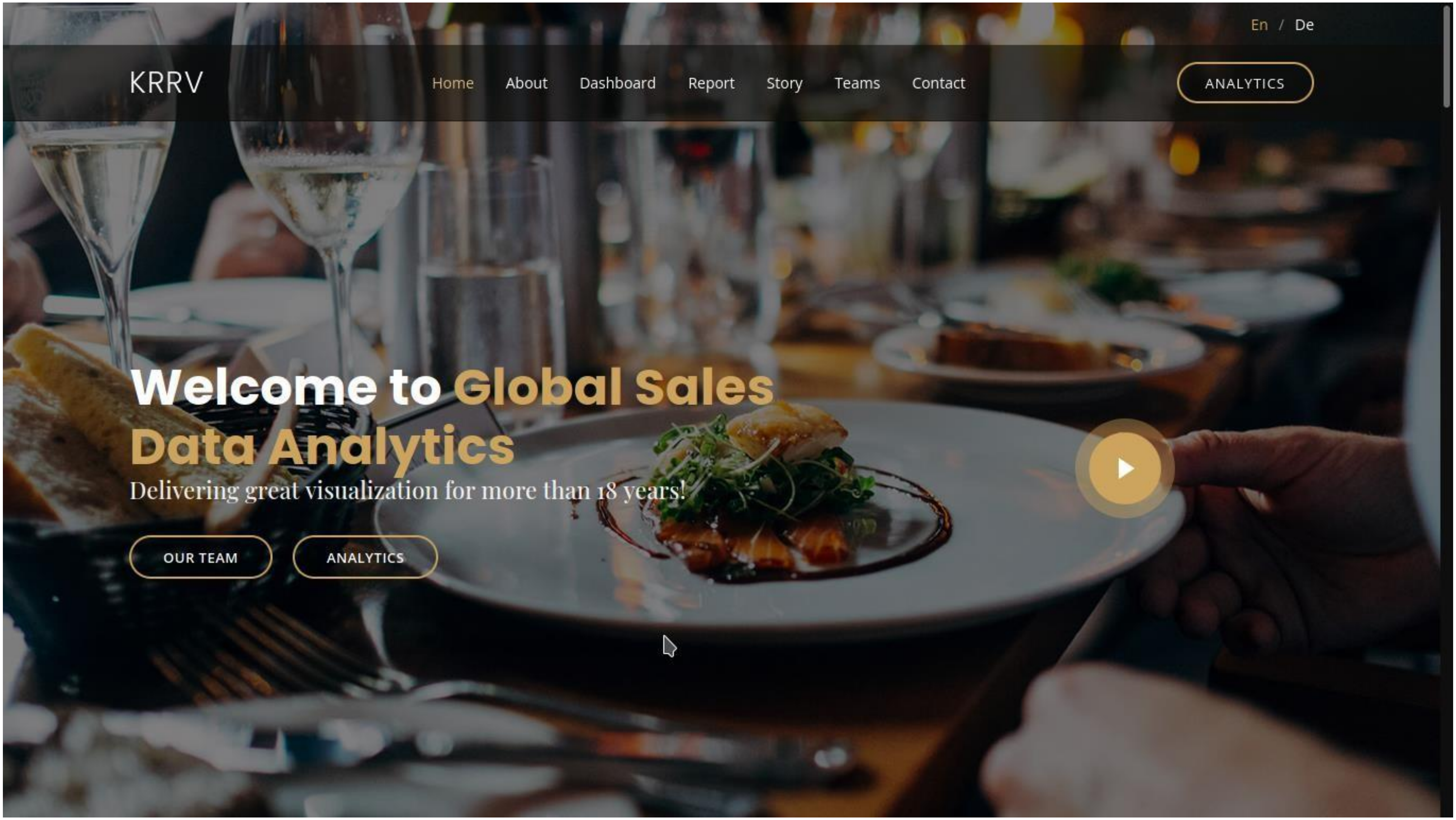
PROJECT OUTPUT

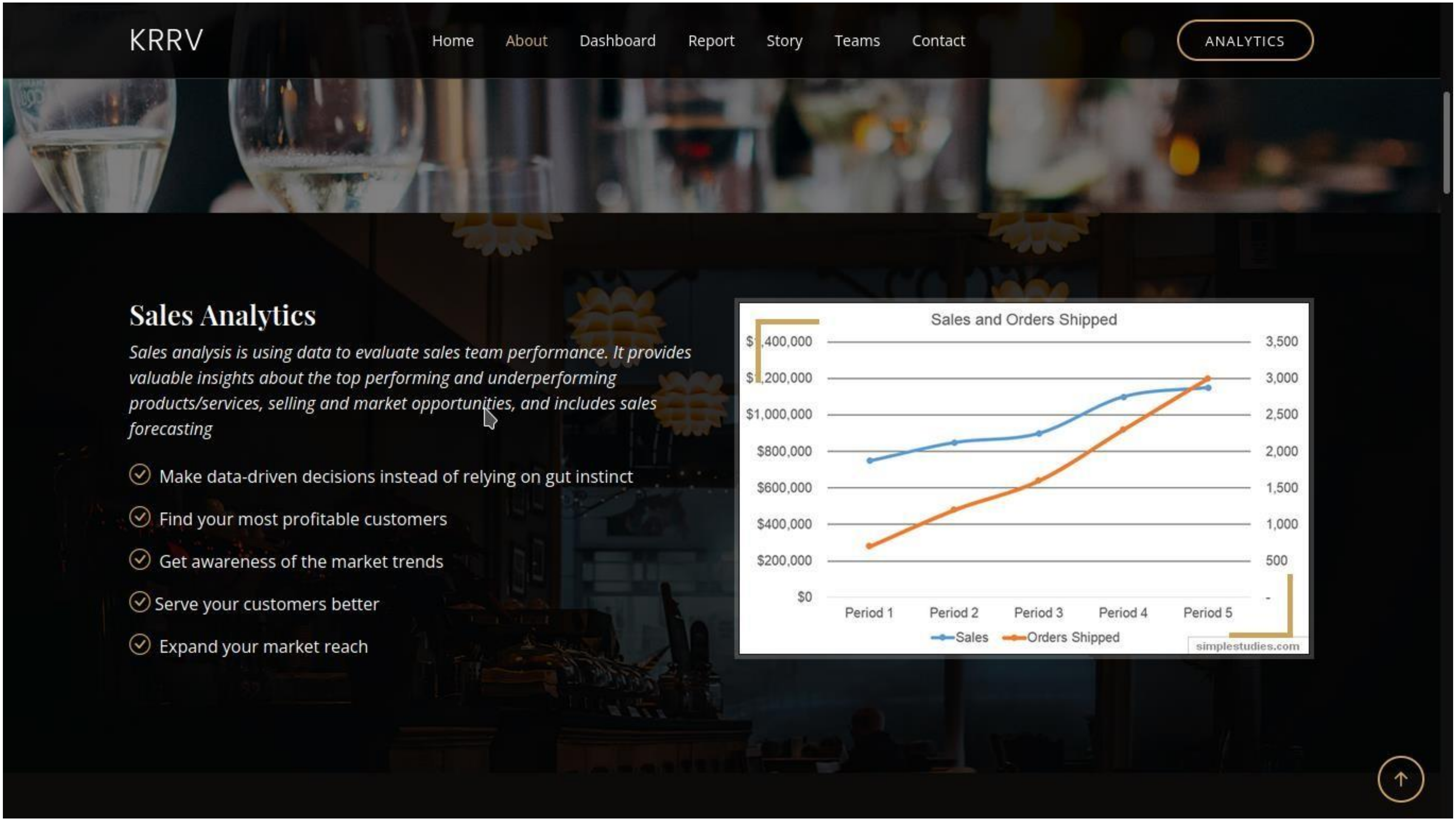
Team ID	PNT2022TMID08923
Project Name	Global Sales Data Analytics

WEB APPLICATION:



Welcome to Global Sales Data Analytics

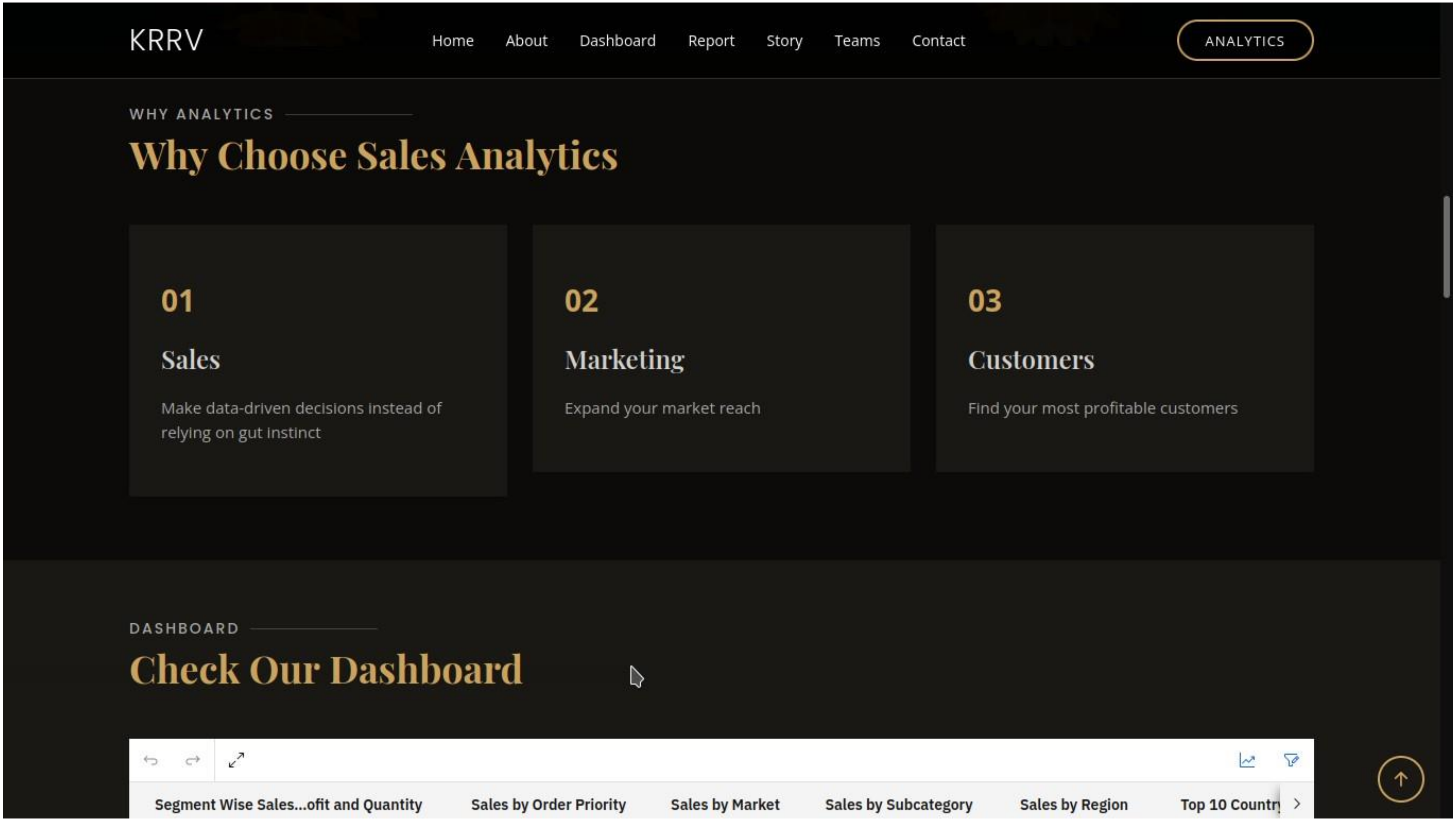
Delivering great visualization for more than 18 years!



Sales Analytics

Sales analysis is using data to evaluate sales team performance. It provides valuable insights about the top performing and underperforming products/services, selling and market opportunities, and includes sales forecasting

- ✓ Make data-driven decisions instead of relying on gut instinct
- ✓ Find your most profitable customers
- ✓ Get awareness of the market trends
- ✓ Serve your customers better
- ✓ Expand your market reach



WHY ANALYTICS

Why Choose Sales Analytics

01

Sales

Make data-driven decisions instead of relying on gut instinct

02

Marketing

Expand your market reach

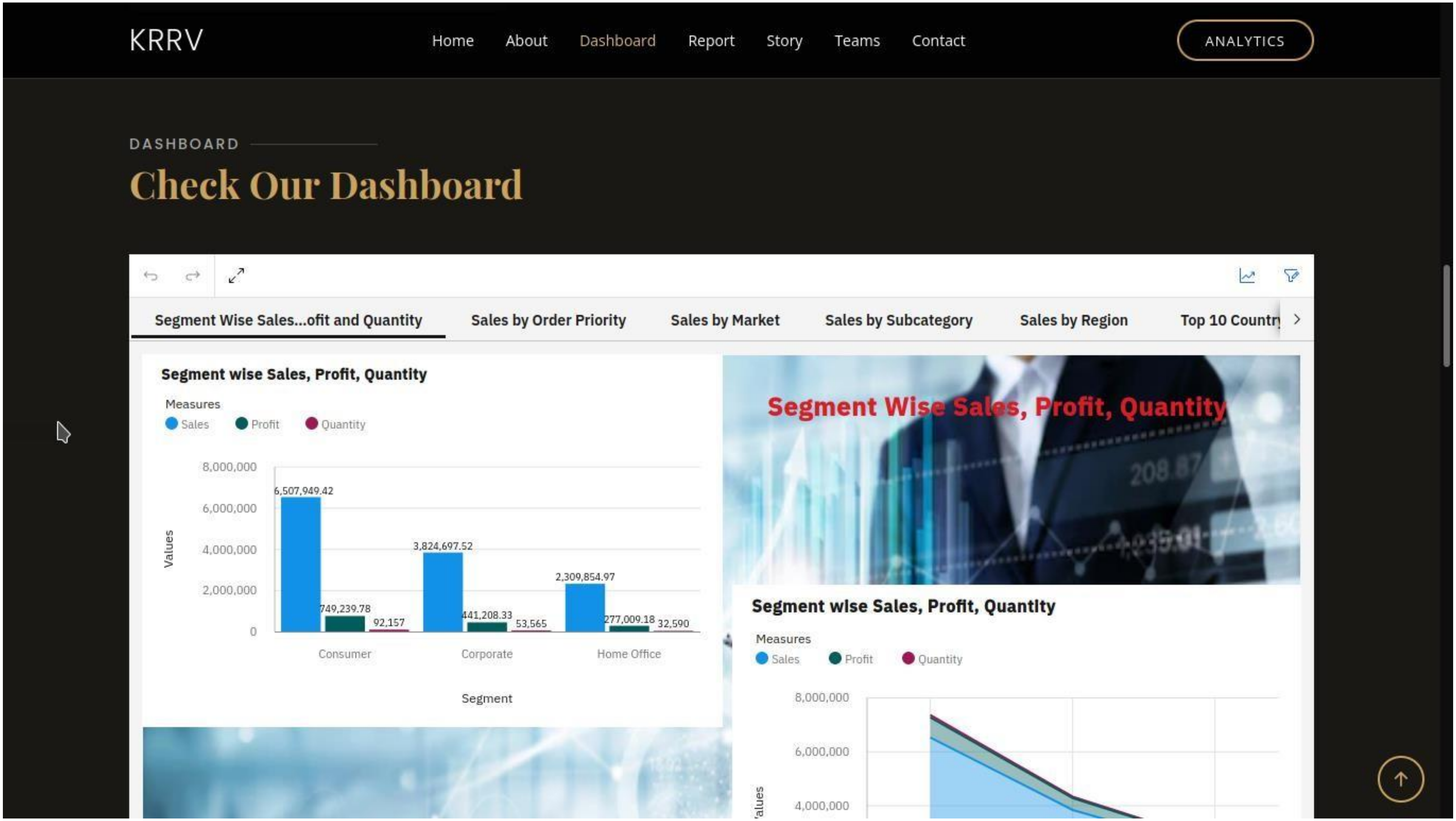
03

Customers

Find your most profitable customers

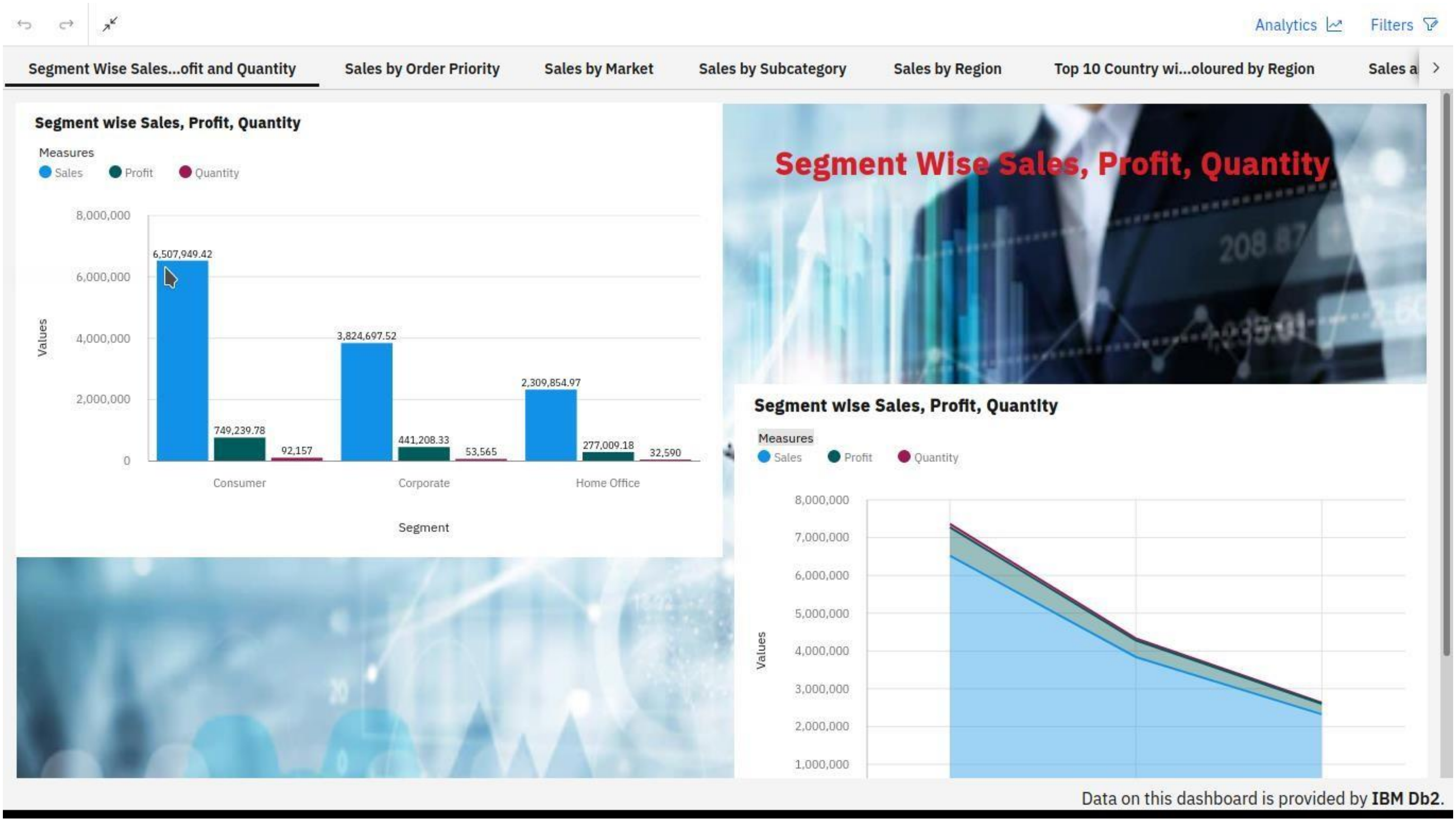
DASHBOARD

Check Our Dashboard



DASHBOARD

Check Our Dashboard



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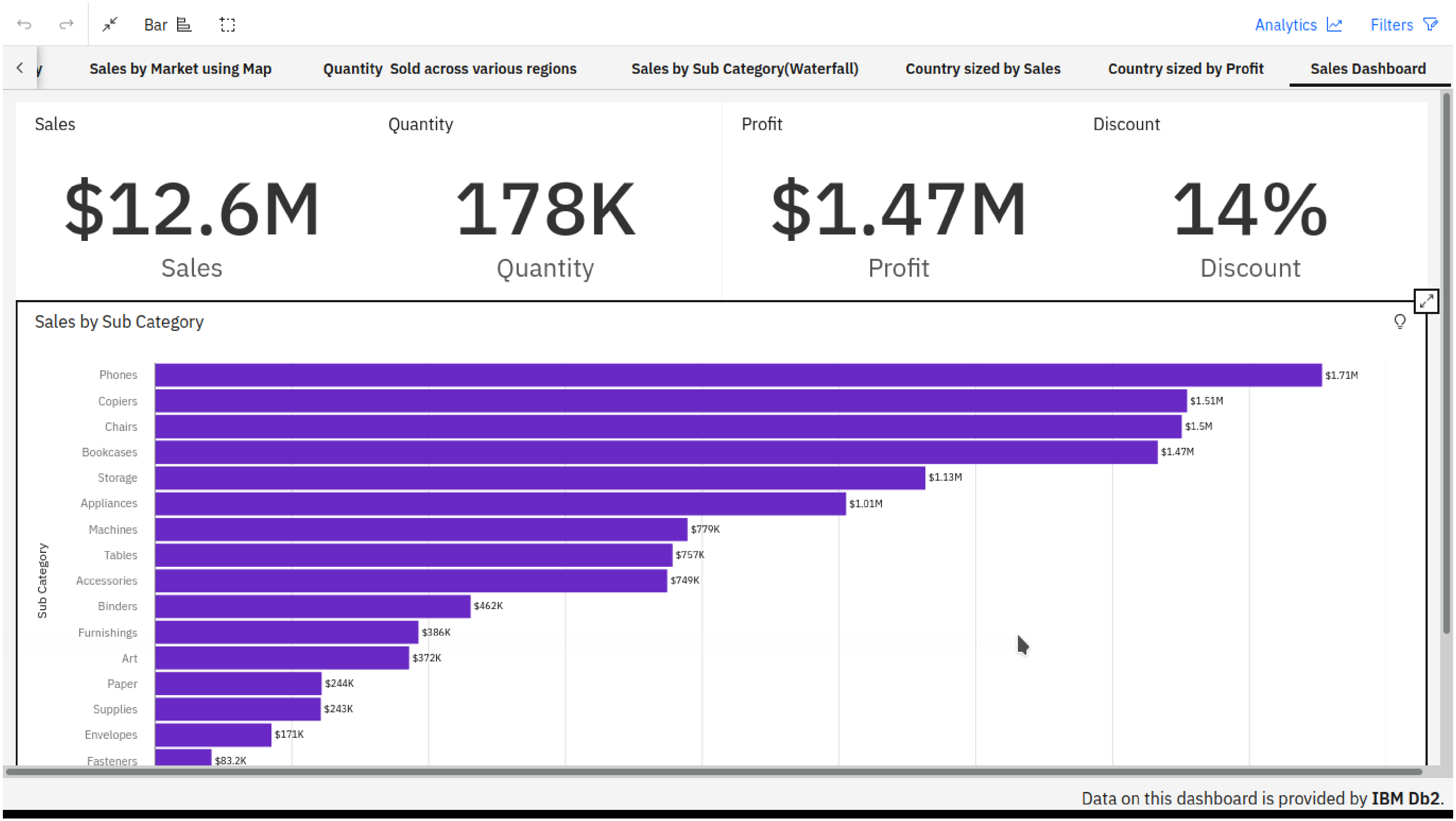

Bar
Analytics
Filters
Sales by Market using Map
Quantity Sold across various regions
Sales by Sub Category(Waterfall)
Country sized by Sales
Country sized by Profit
Sales Dashboard

Sales

$12.6M

Sales

Quantity

178K

Quantity

Profit

$1.47M

Profit

Discount

14%

Discount

Sales by Sub Category

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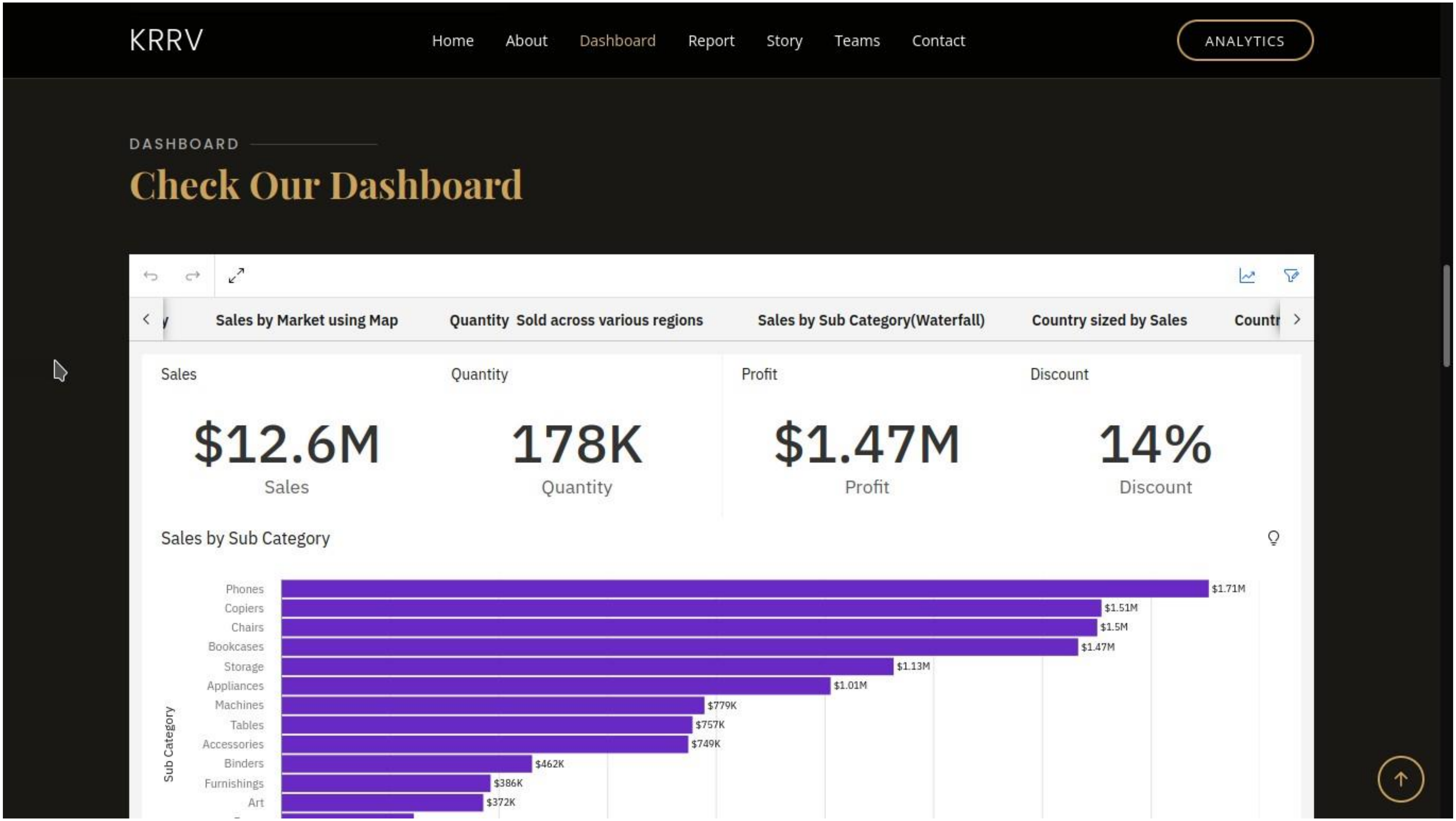

KRRV

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ANALYTICS

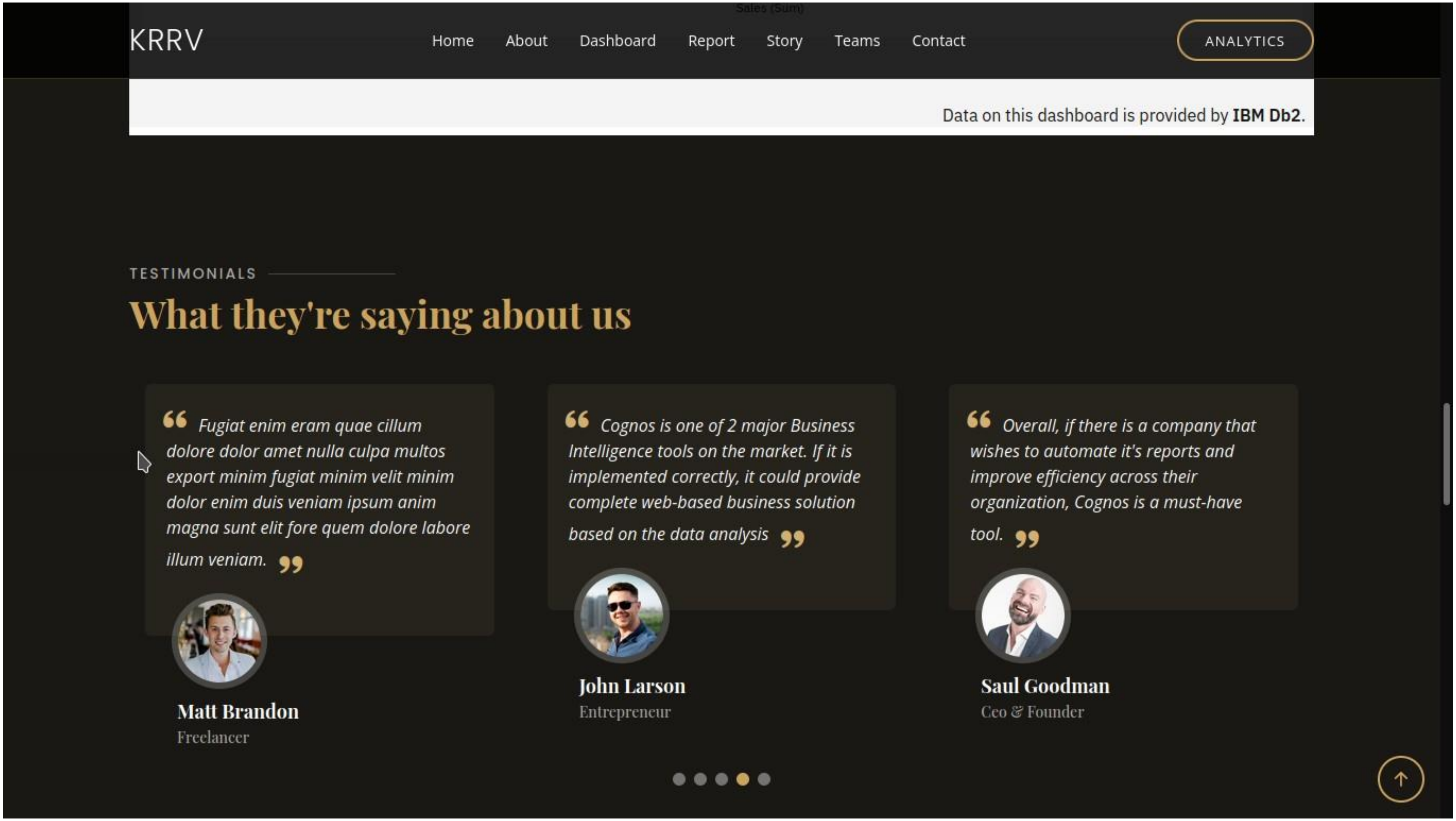
DASHBOARD

Check Our Dashboard

y
Sales by Market using Map
Quantity Sold across various regions
Sales by Sub Category(Waterfall)
Country sized by Sales
Countr

Sales	Quantity	Profit	Discount
$12.6M	178K	$1.47M	14%
Sales	Quantity	Profit	Discount

Sales by Sub Category



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TESTIMONIALS

What they're saying about us

“Fugiat enim eram quae cillum dolore dolor amet nulla culpa multos export minim fugiat minim velit minim dolor enim duis veniam ipsum anim magna sunt elit fore quem dolore labore illum veniam.”

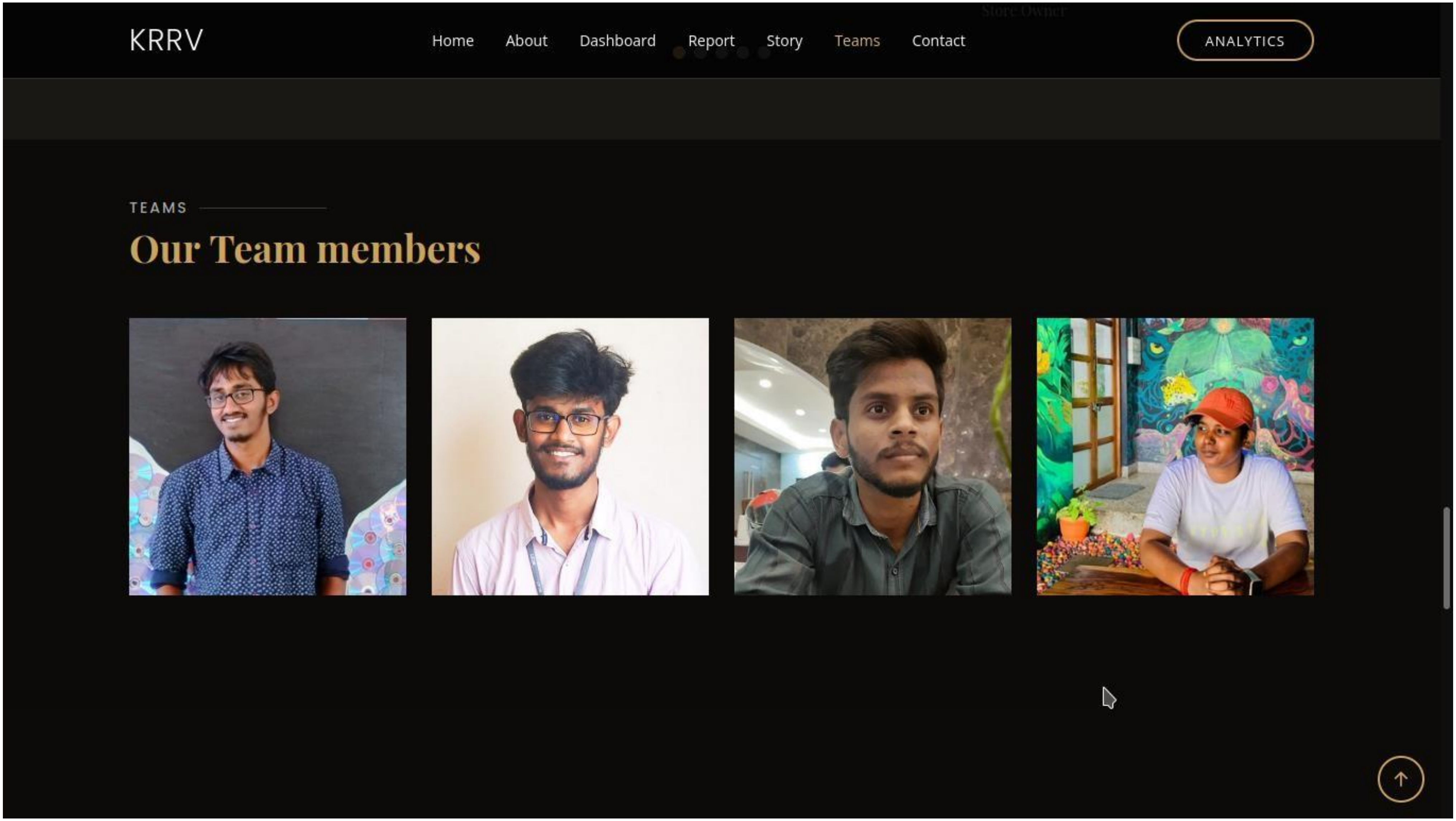
Matt Brandon
Freelancer

“Cognos is one of 2 major Business Intelligence tools on the market. If it is implemented correctly, it could provide complete web-based business solution based on the data analysis”

John Larson
Entrepreneur

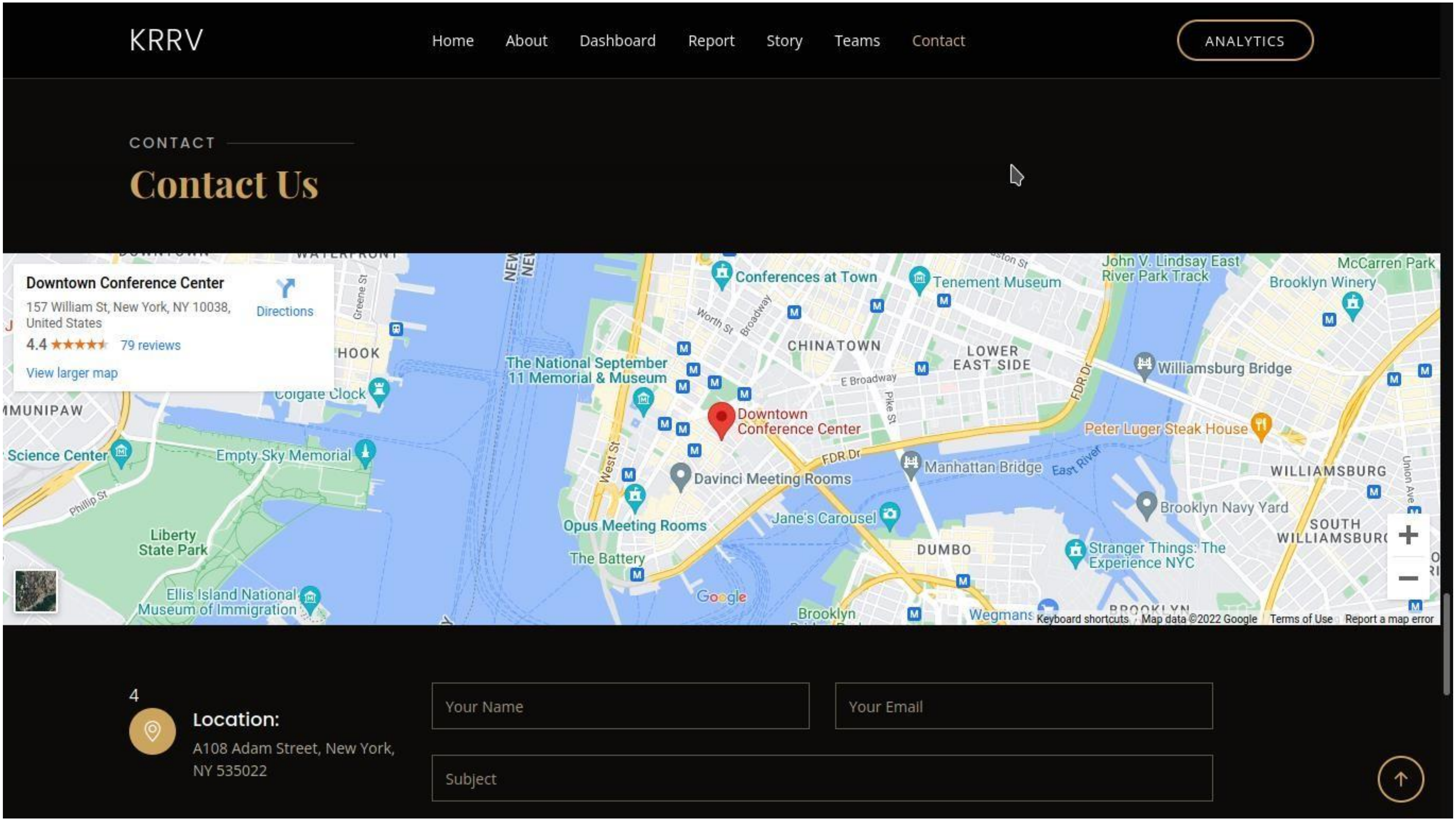
“Overall, if there is a company that wishes to automate it's reports and improve efficiency across their organization, Cognos is a must-have tool.”

Saul Goodman
Ceo & Founder



TEAMS

Our Team members



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157 William St, New York, NY 10038, United States
4.4 ★★★★★ 79 reviews
View larger map

Directions

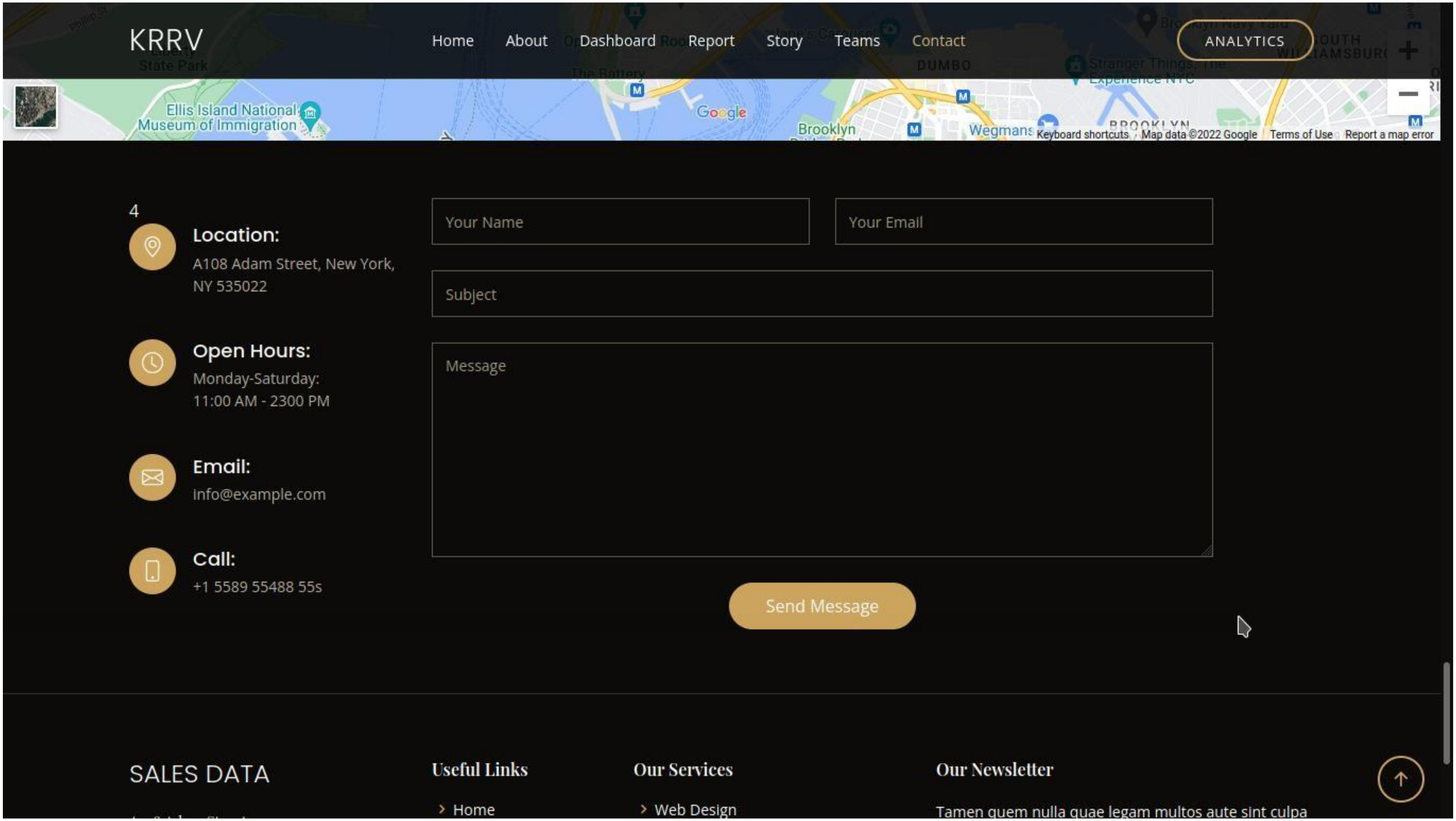
4

Location:
A108 Adam Street, New York, NY 535022

Your Name

Your Email

Subject



4

Location:
A108 Adam Street, New York,
NY 535022

Open Hours:
Monday-Saturday:
11:00 AM - 2300 PM

Email:
info@example.com

Call:
+1 5589 55488 55s

SALES DATA

Useful Links

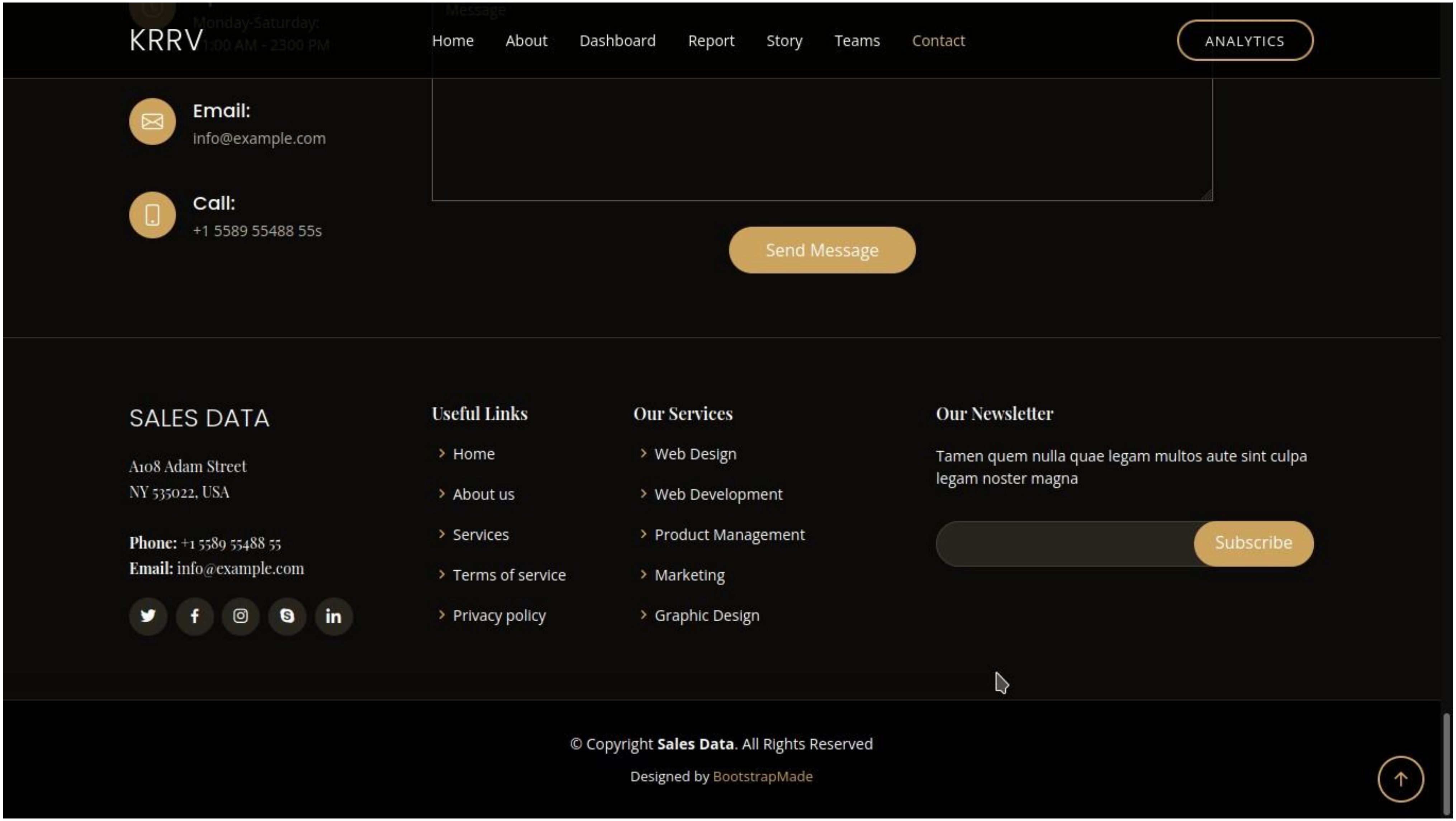
- Home

Our Services

- Web Design

Our Newsletter

Tamen quem nulla quae legam multos aute sint culpa



Monday-Saturday:
1:00 AM - 2300 PM

Message

Email:
info@example.com

Call:
+1 5589 55488 55s

SALES DATA

A108 Adam Street
NY 535022, USA

Phone: +1 5589 55488 55
Email: info@example.com

Useful Links

- Home
- About us
- Services
- Terms of service
- Privacy policy

Our Services

- Web Design
- Web Development
- Product Management
- Marketing
- Graphic Design

Our Newsletter

Tamen quem nulla quae legam multos aute sint culpa legam noster magna

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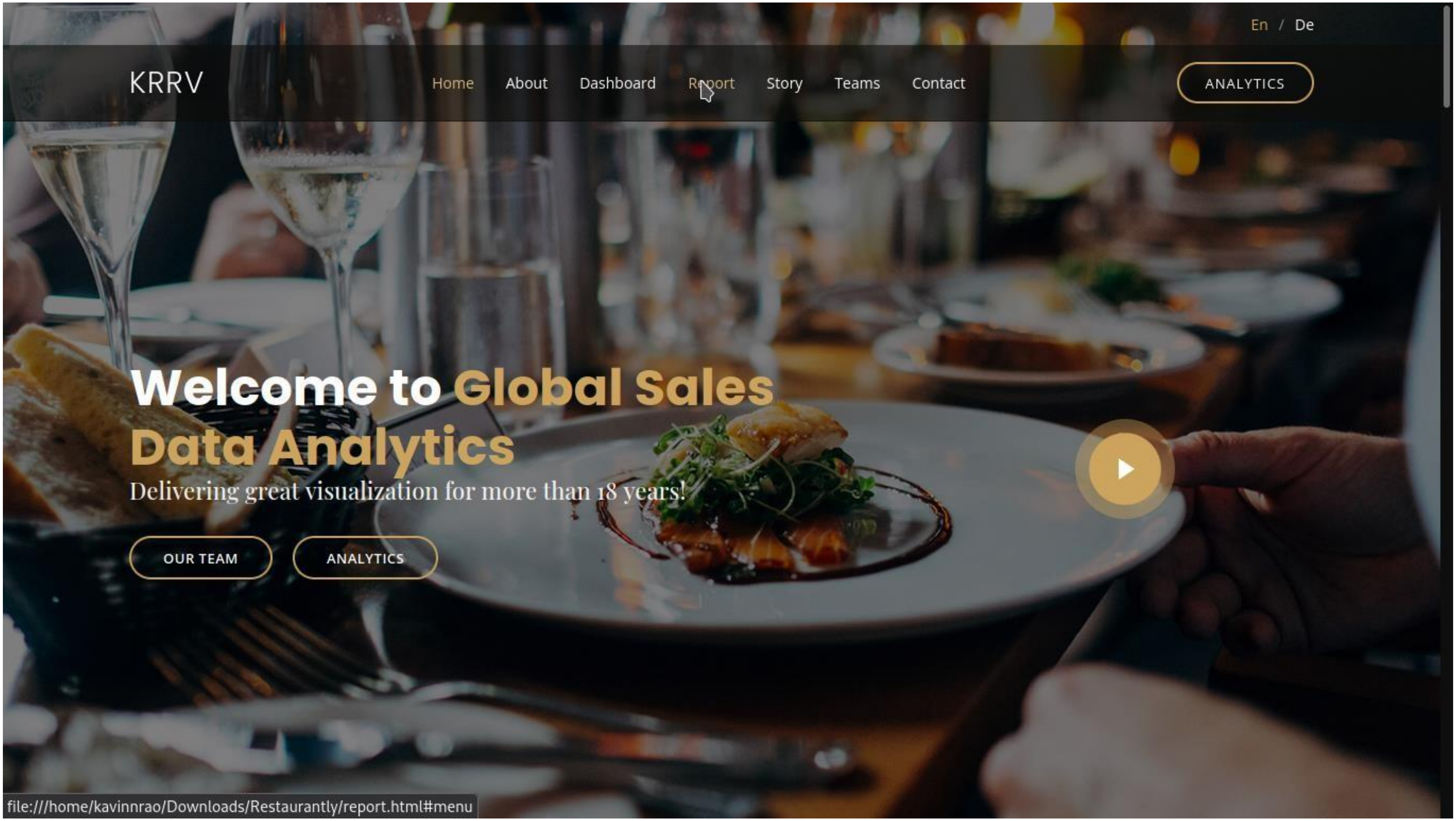

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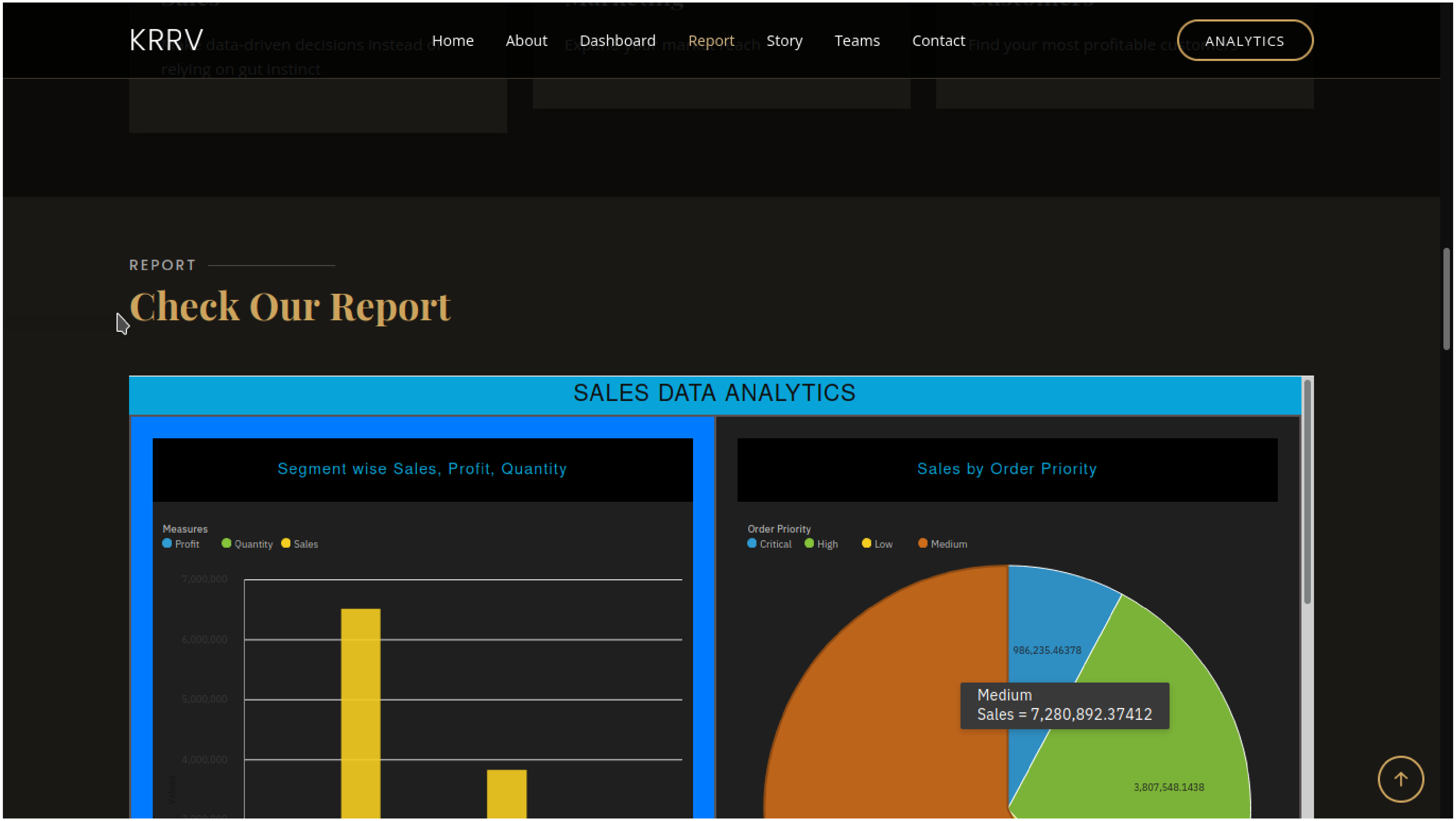
file:///home/kavinnrao/Downloads/Restaurantly/report.html#menu



Make data-driven decisions instead of relying on gut instinct

Expand your market reach

Find your most profitable customers

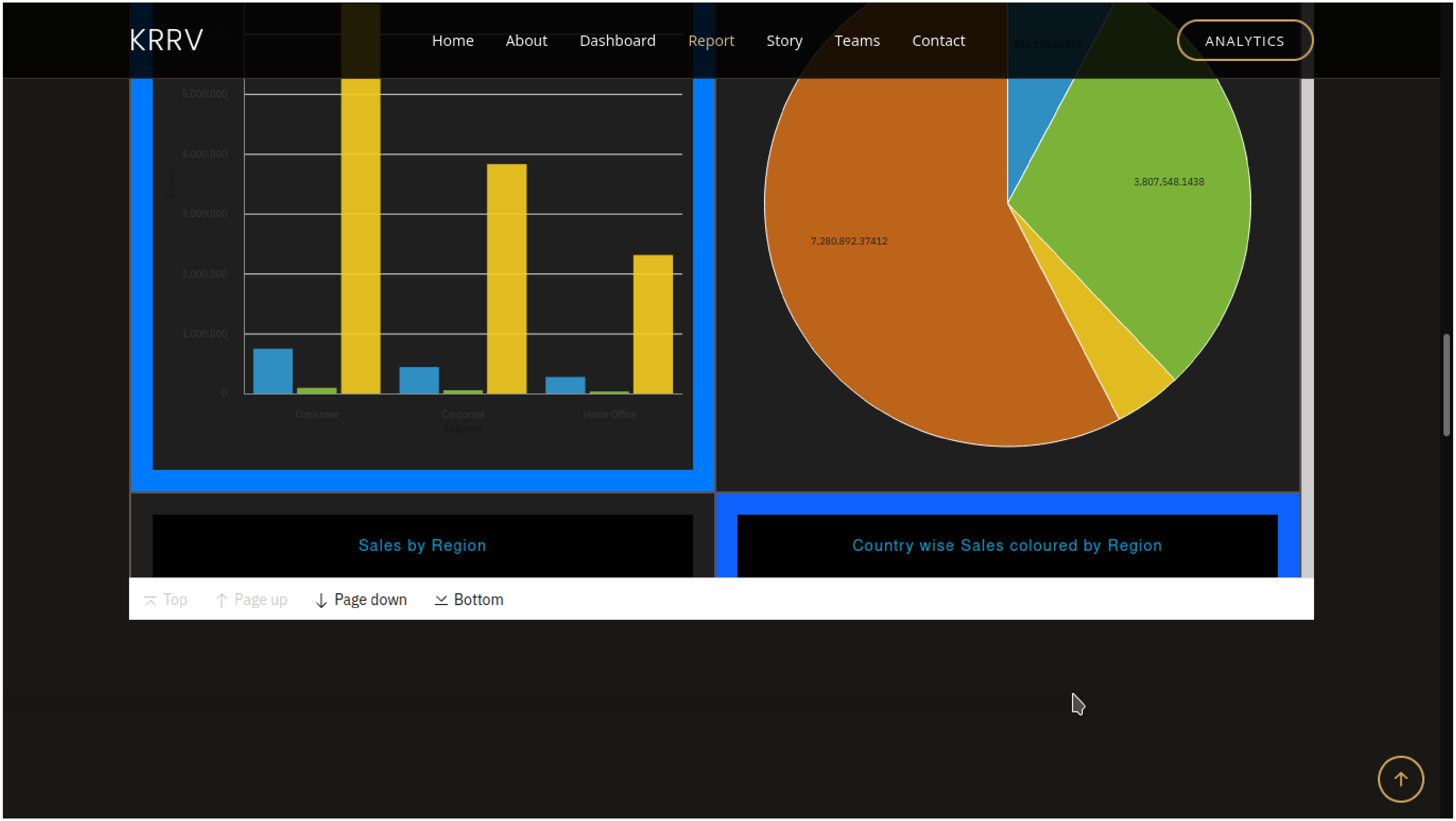
REPORT

Check Our Report

SALES DATA ANALYTICS

Segment wise Sales, Profit, Quantity

Sales by Order Priority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Home
About
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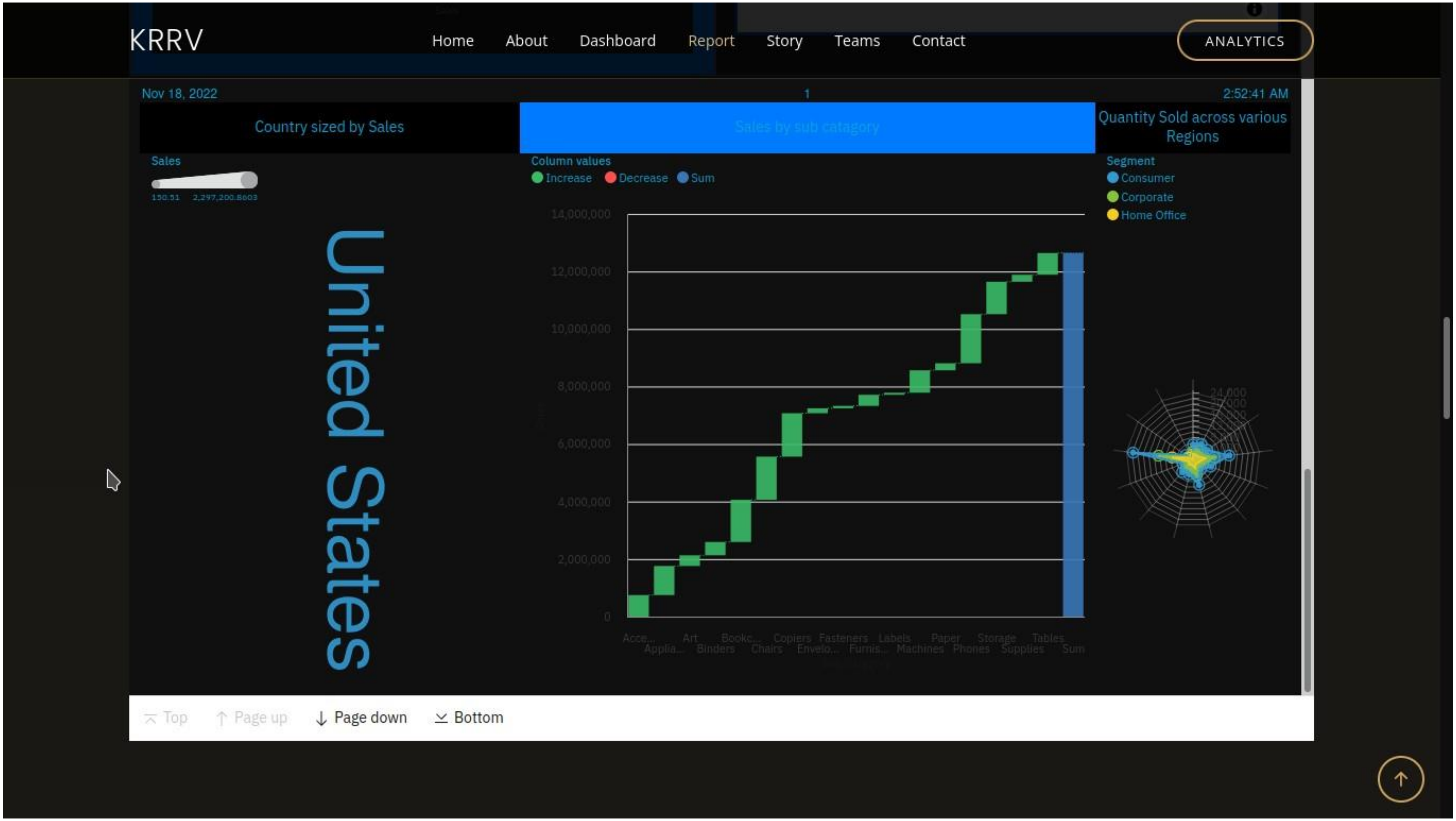
ANALYTICS
5,000,000
4,000,000
3,000,000
2,000,000
1,000,000
0
Values
Consumer
Corporate
Home Office
Segment
986,235.46378
3,807,548.1438
7,280,892.37412
Sales by Region
Country wise Sales coloured by Region
Top
Page up
Page down
Bottom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ANALYTICS
Nov 18, 2022
1
2:52:41 AM
Country sized by Sales
Sales by sub catagory
Quantity Sold across various Regions
Sales
150.51
2,297,200.8603
United States
Column values
● Increase
● Decrease
● Sum
14,000,000
12,000,000
10,000,000
8,000,000
6,000,000
4,000,000
2,000,000
0
Acce...
Applia...
Art
Binders
Bookc...
Chairs
Copiers
Envelo...
Fasteners
Furnis...
Labels
Machines
Paper
Phones
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Tables
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Segment
● Consumer
● Corporate
● Home Office
24,000
Top
Page up
Page down
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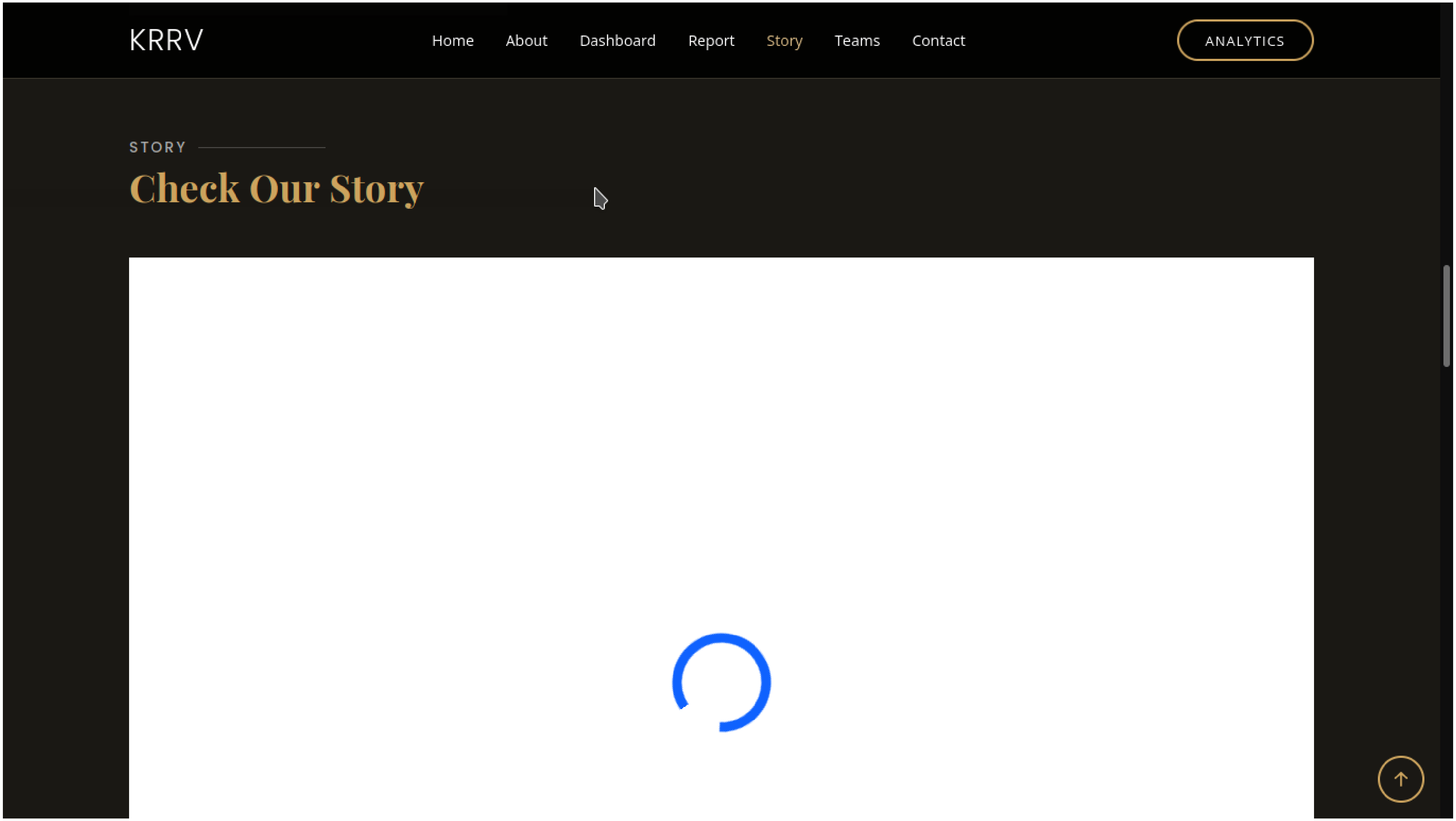
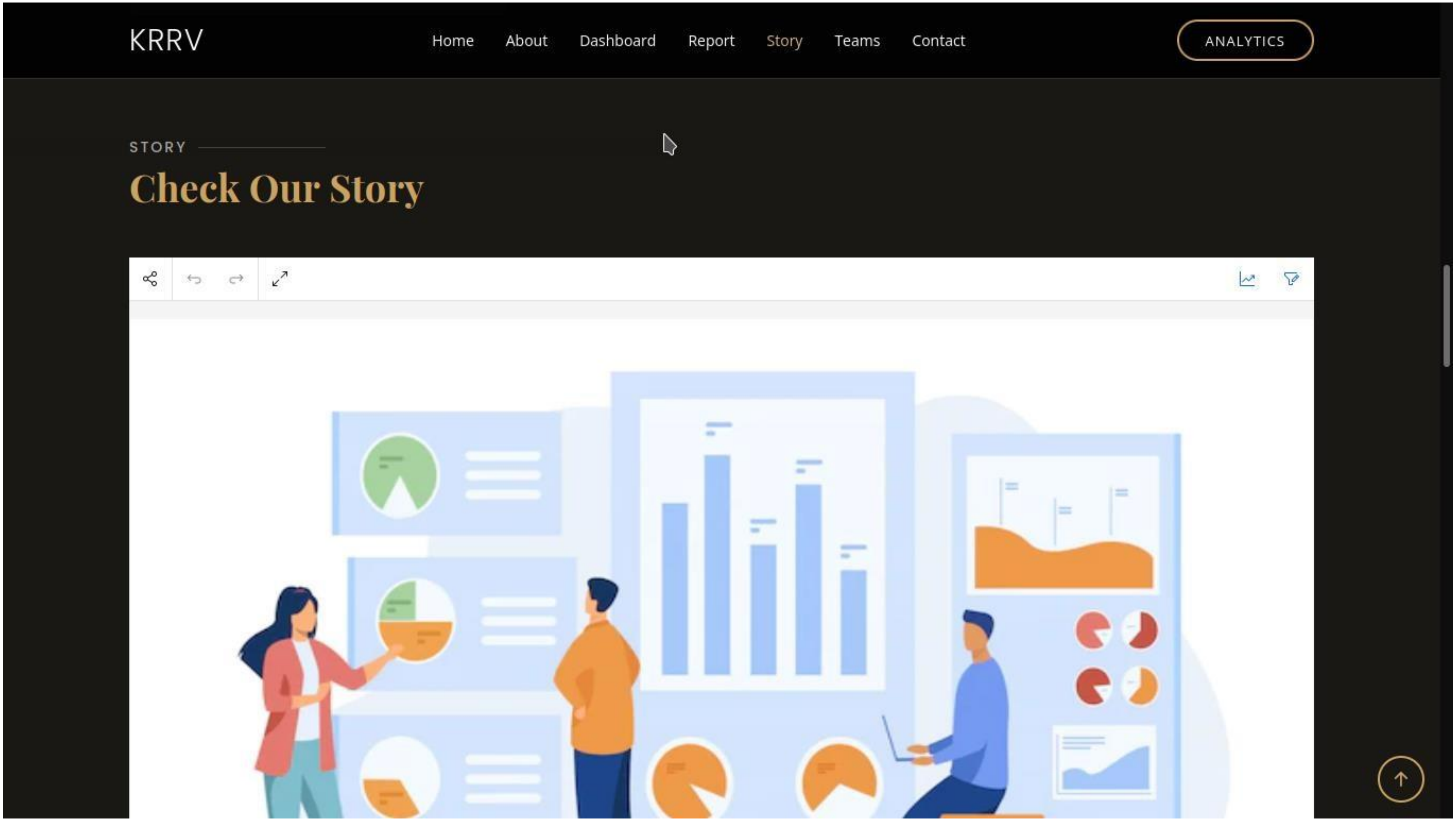


STORY

Check Our Story



STORY

Check Our Story

Data on this story is provided by **IBM Db2**.

SALES DATA ANALYTICS

Let's get start

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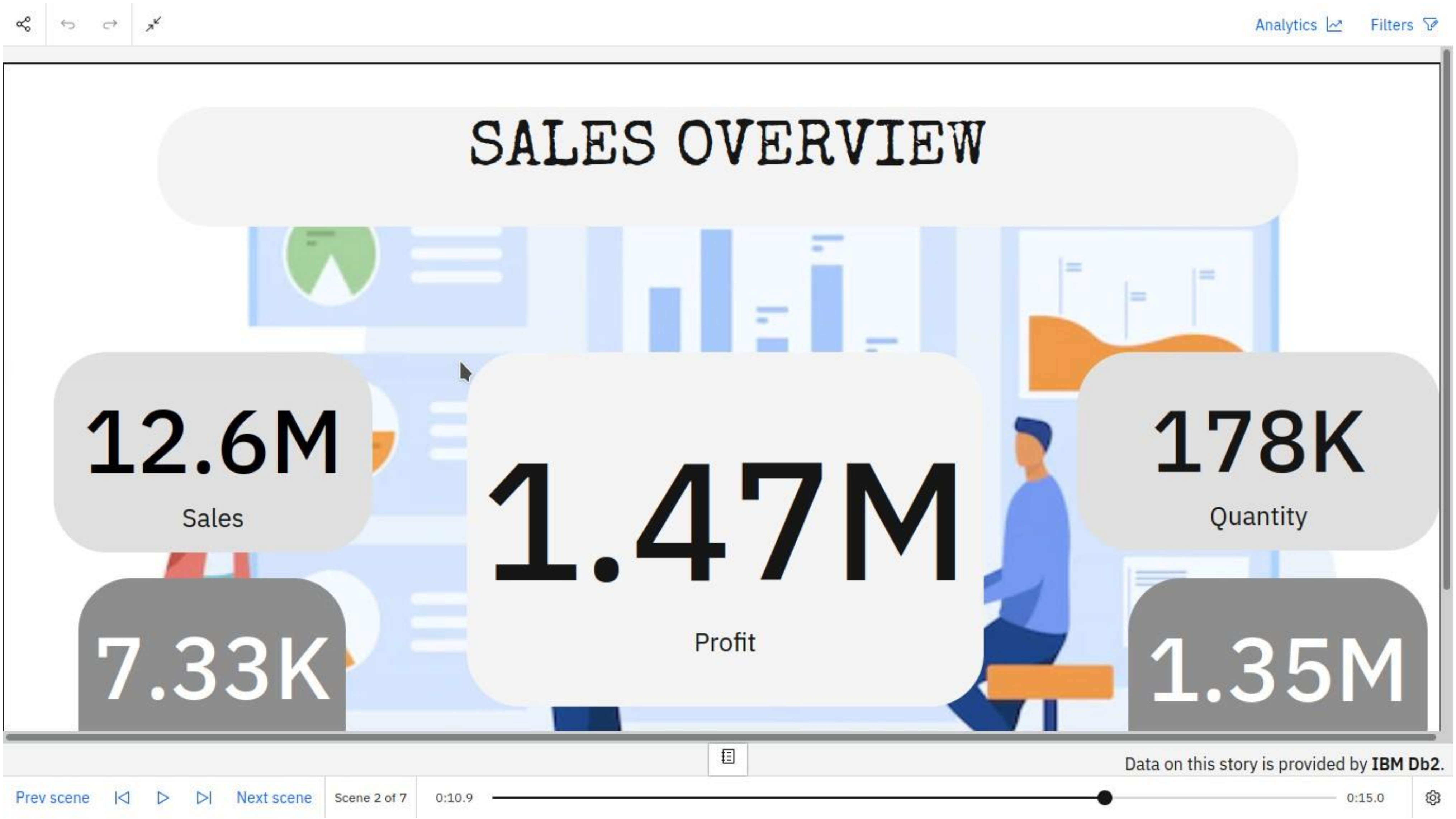

SALES OVERVIEW

12.6M
Sales

1.47M
Profit

178K
Quantity

7.33K

1.35M

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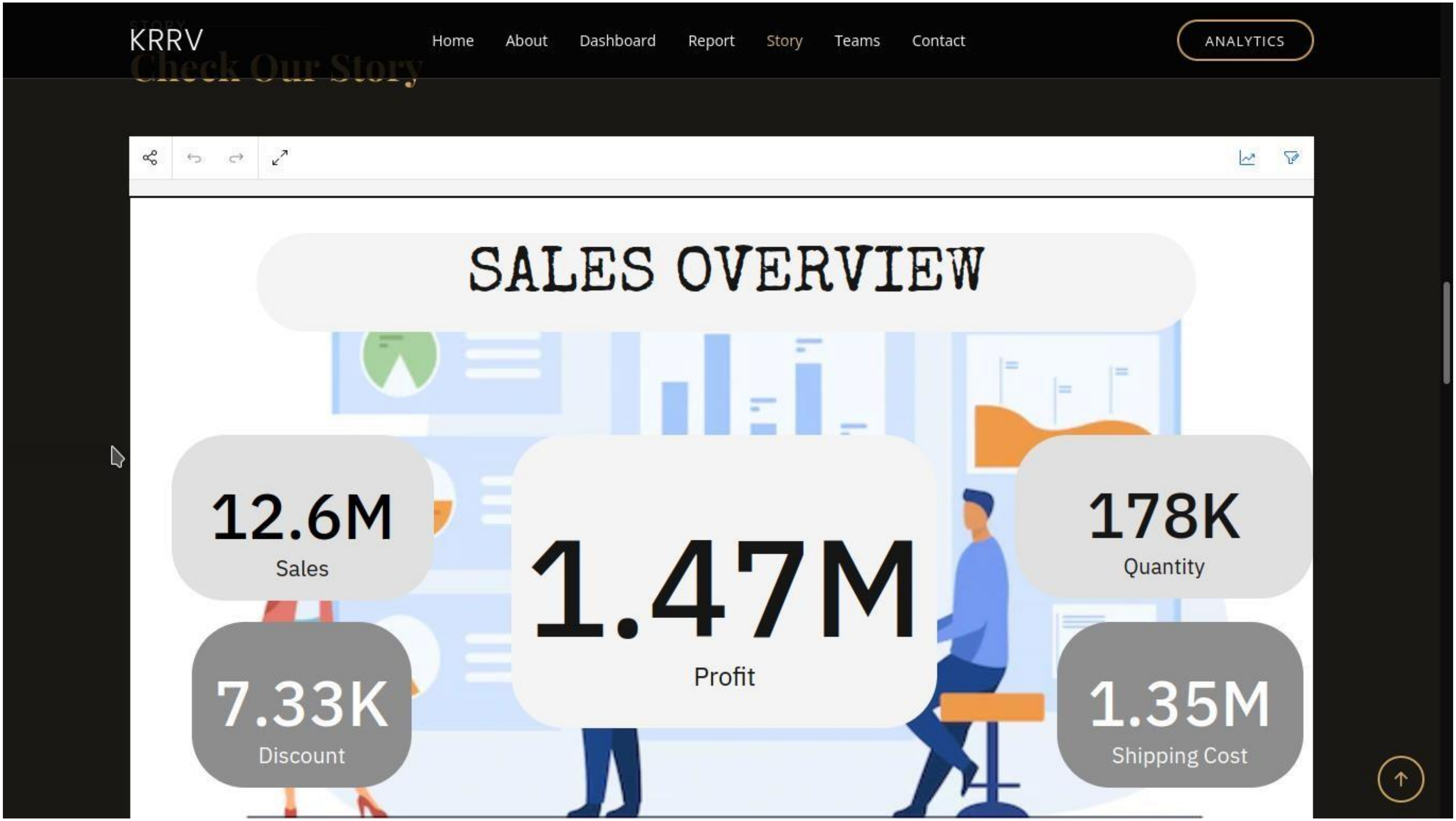

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SALES OVERVIEW

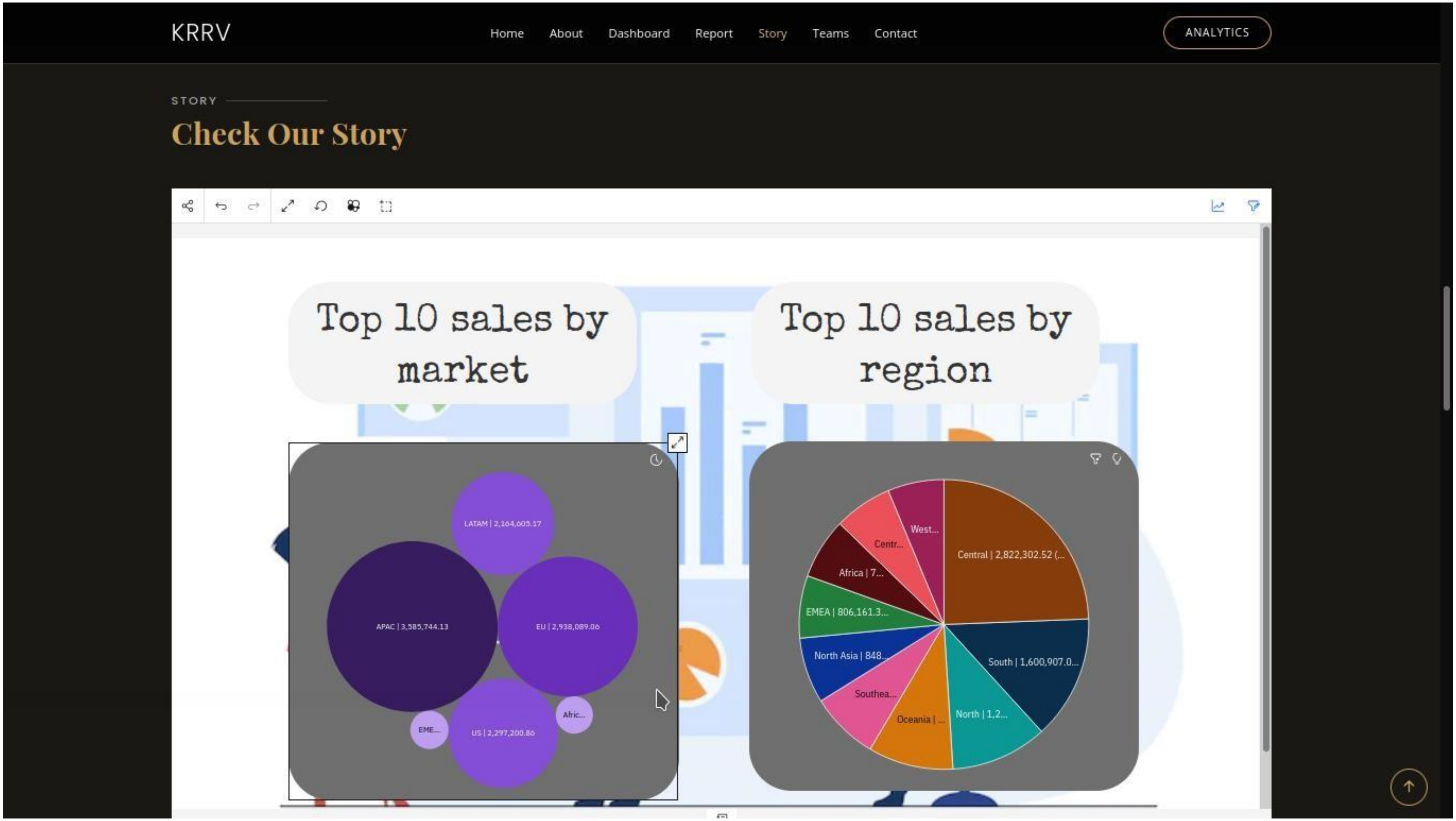
12.6M
Sales

1.47M
Profit

178K
Quantity

7.33K
Discount

1.35M
Shipping Cost



STORY

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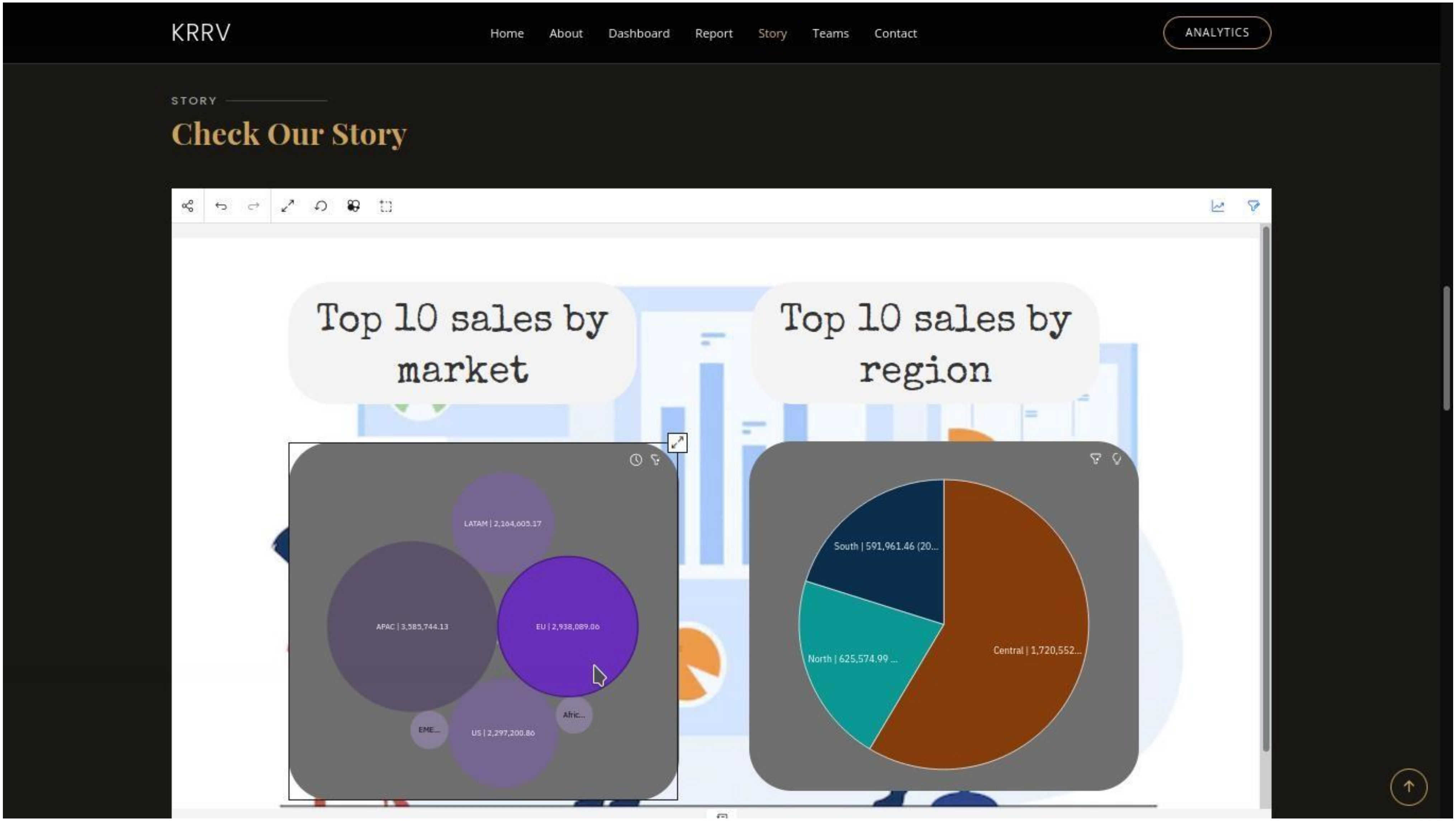
Top 10 sales by market

Top 10 sales by region



STORY

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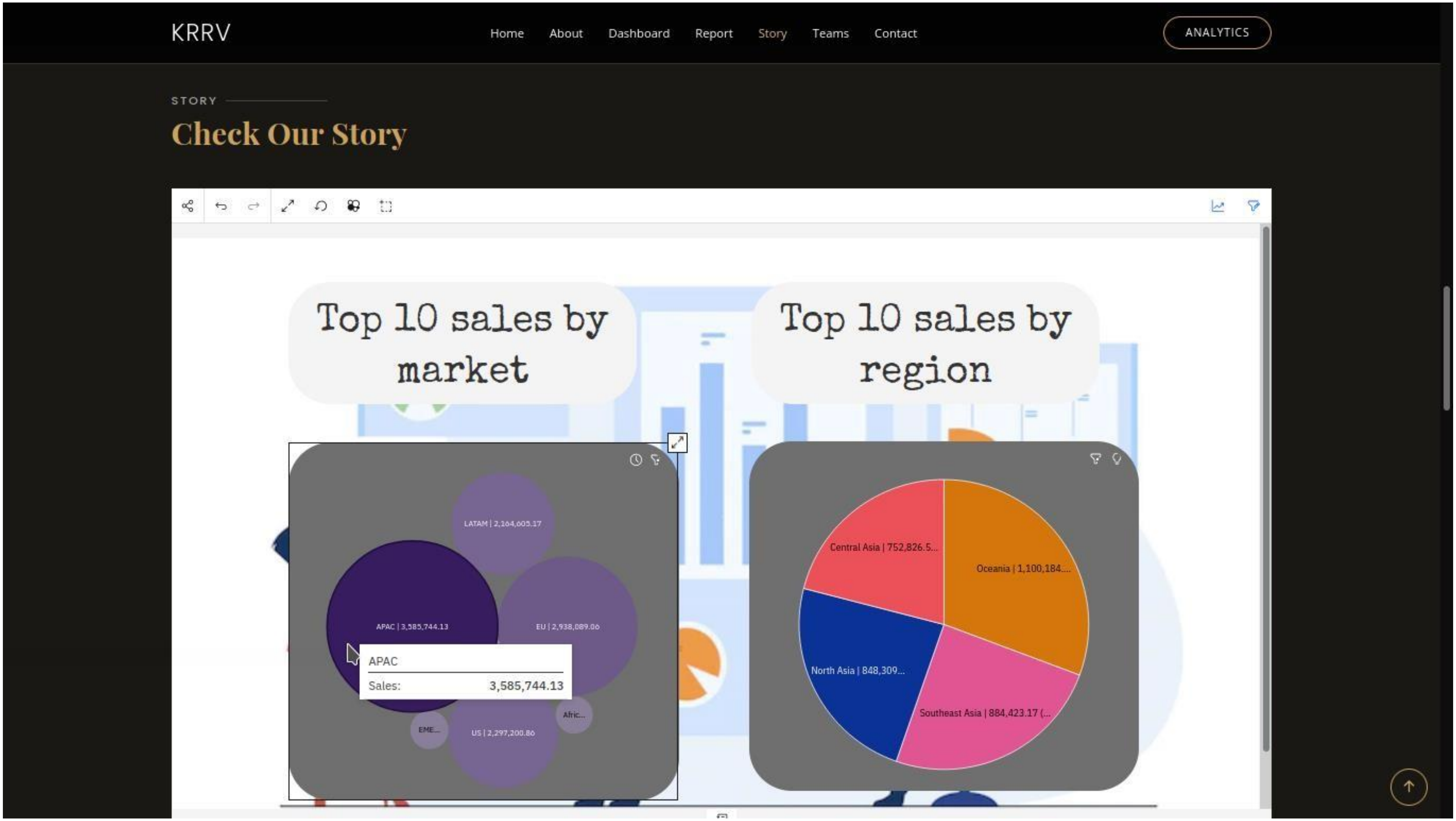
Top 10 sales by market

Top 10 sales by region



STORY

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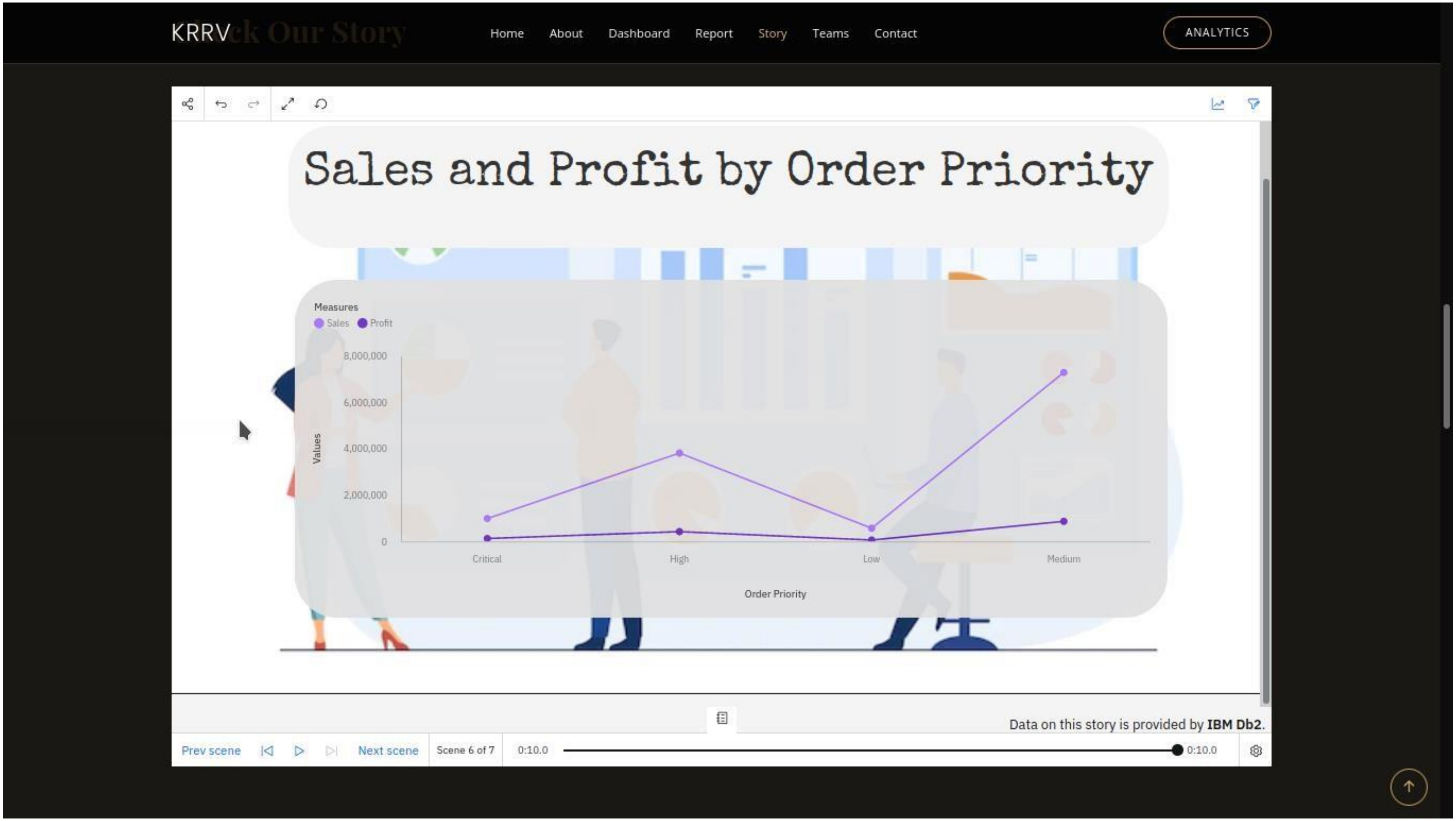
Top 10 sales by market

Top 10 sales by region



Sales and Profit by Order Priority

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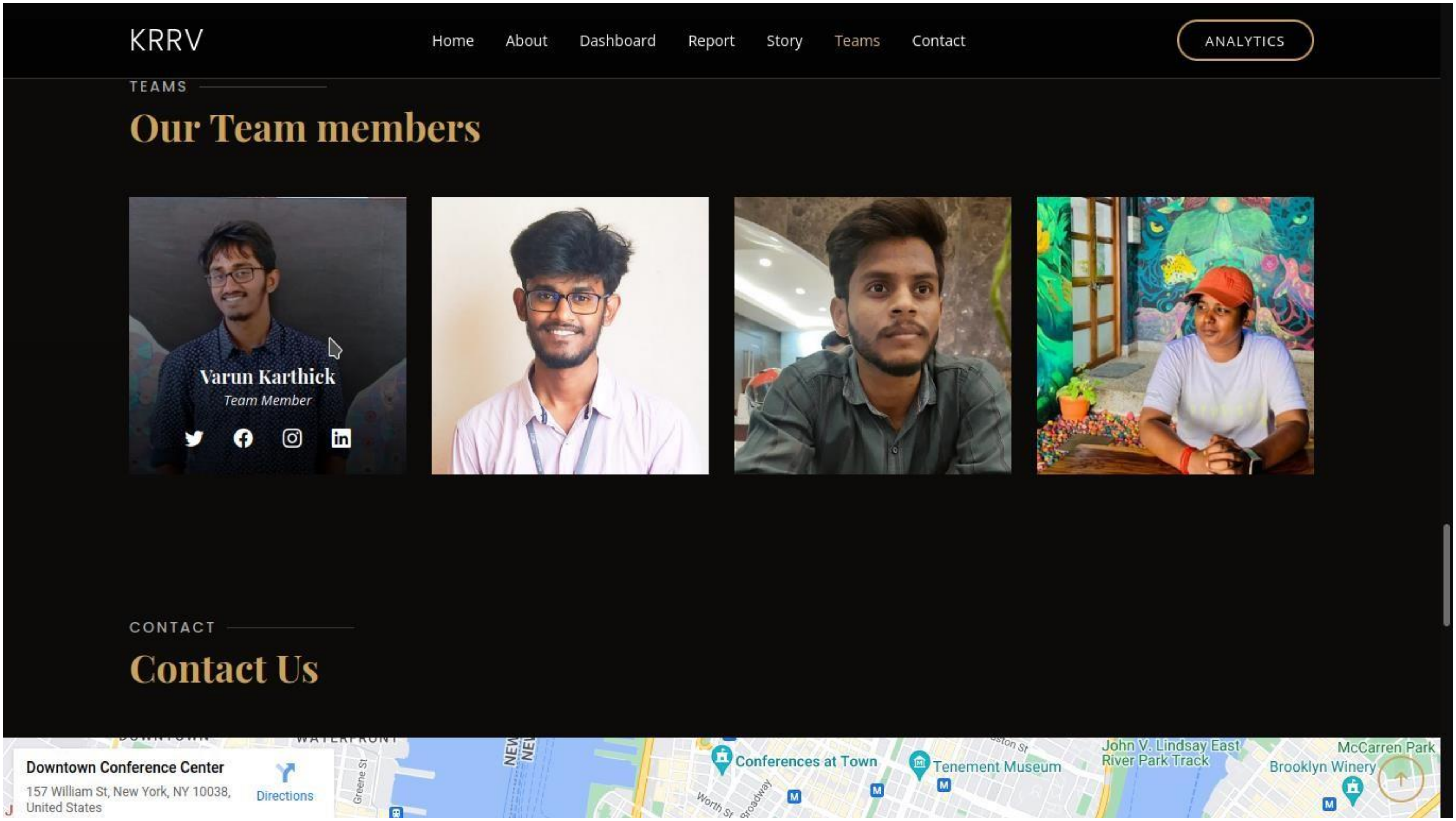

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Our Team members

Varun Karthick

Team Member

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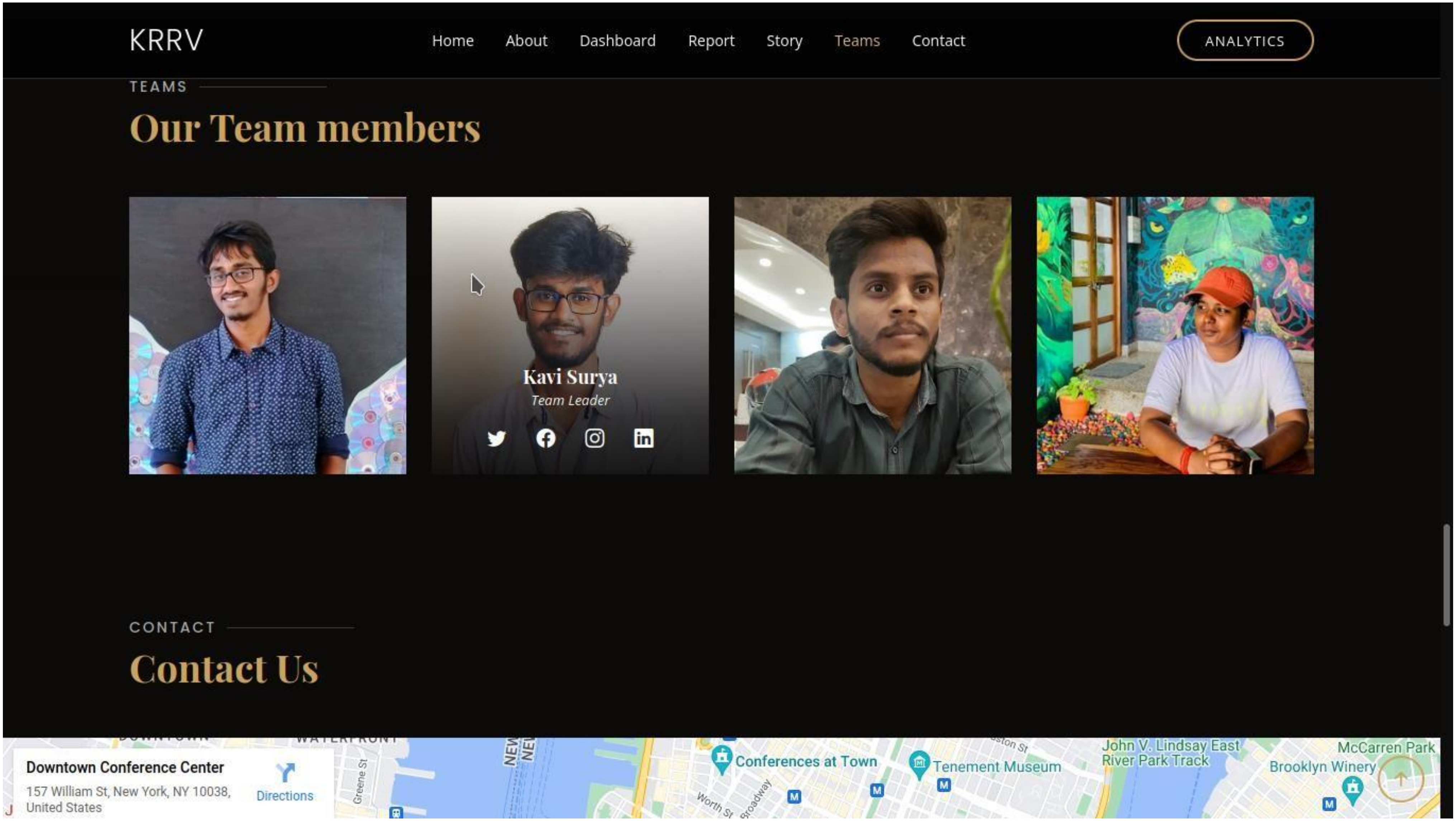

TEAMS

Our Team members

Kavi Surya

Team Leader

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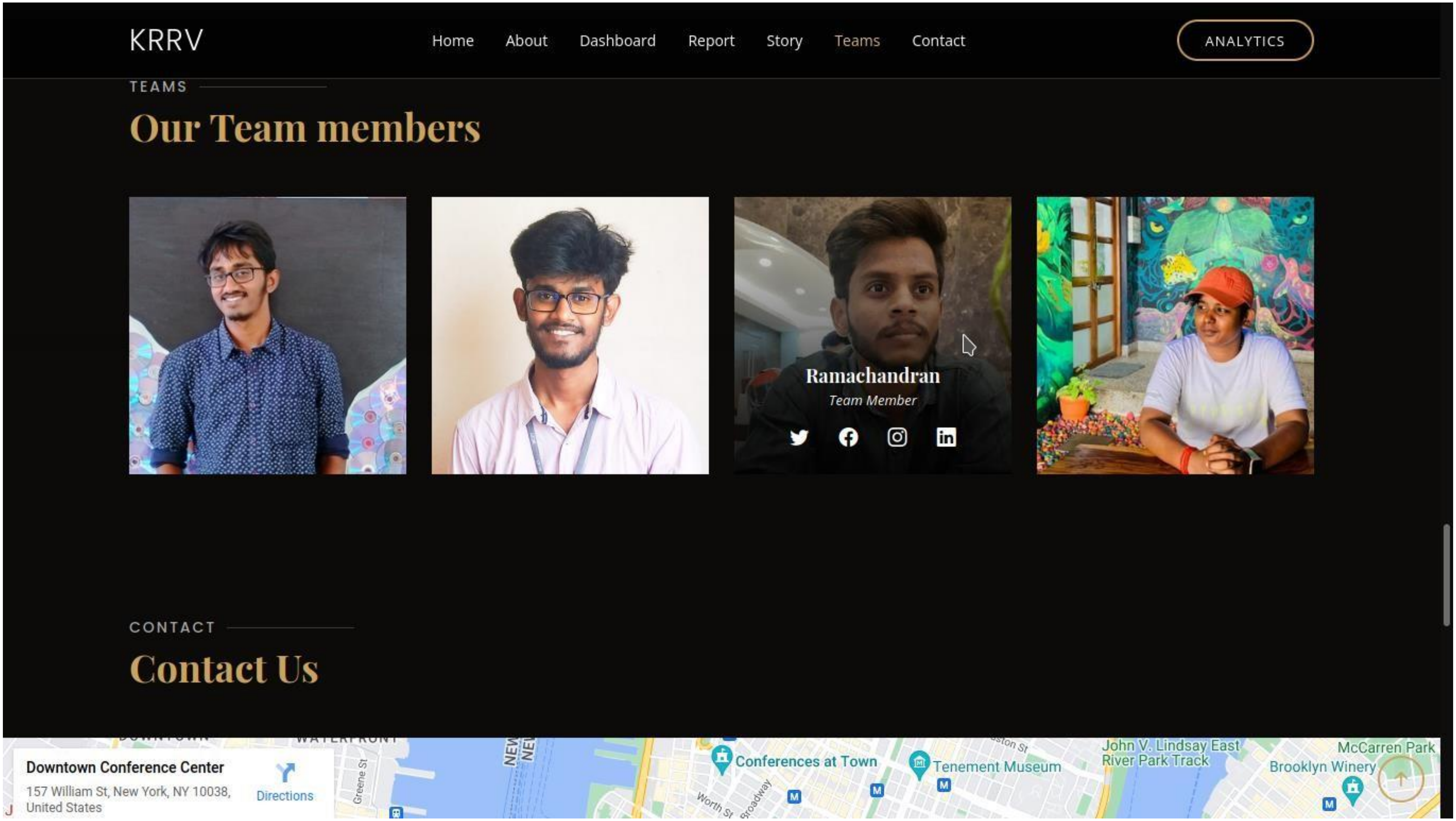
United States



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ANALYTICS

TEAMS

Our Team members

Ramachandran

Team Member

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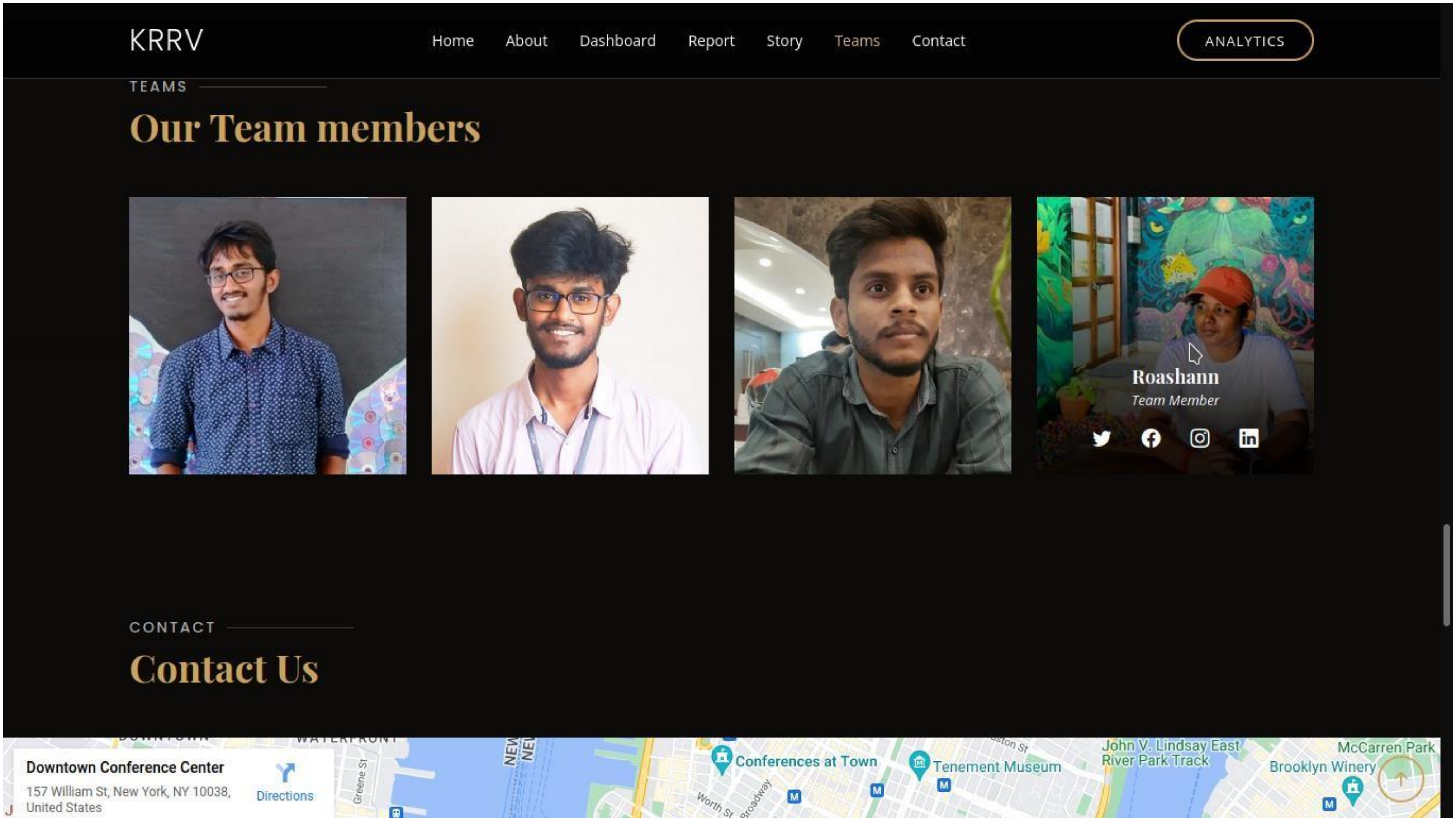
United States

Directions



TEAMS

Our Team members

Roashann

Team Member

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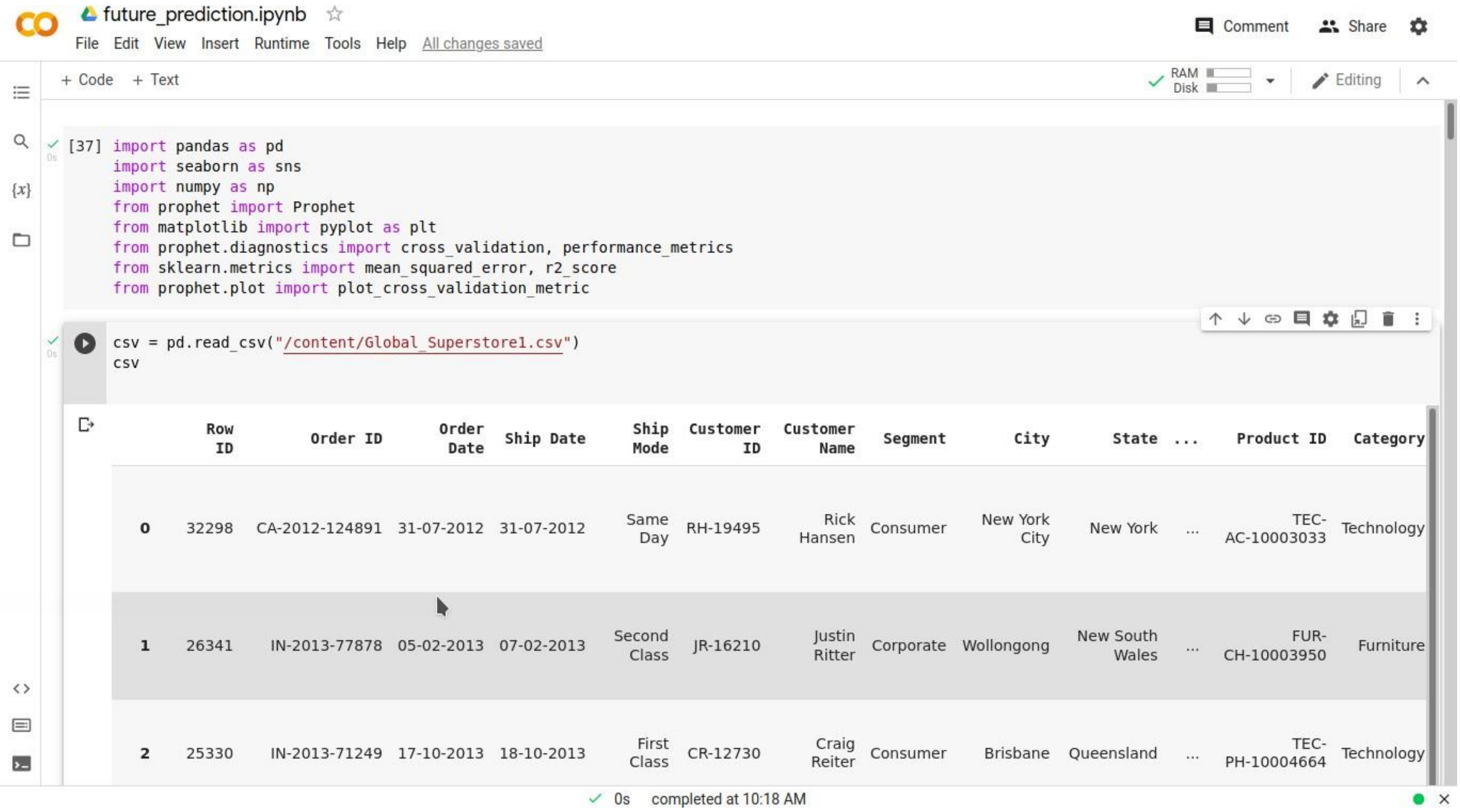
United States

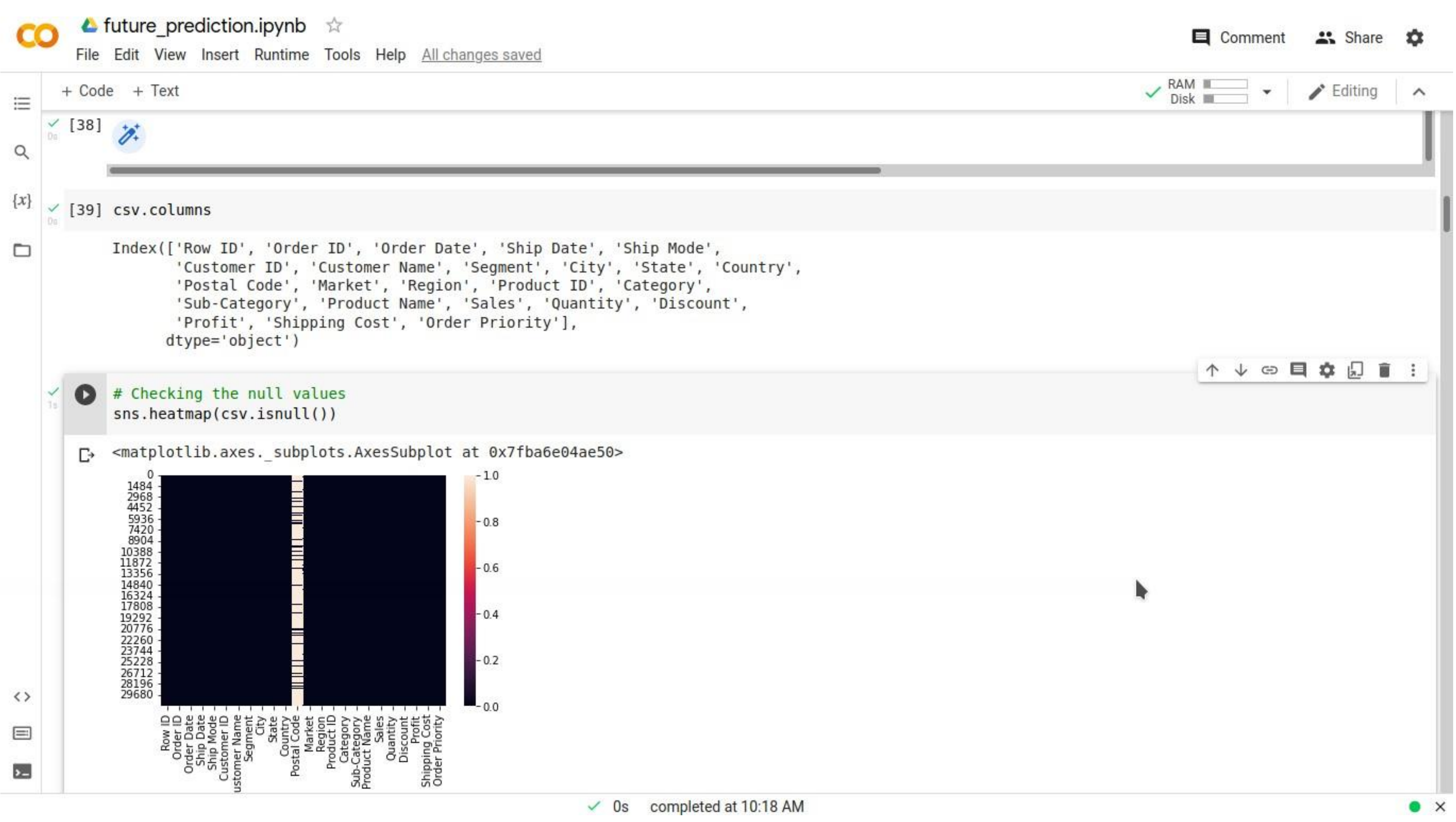
MACHINE LEARNING FOR FUTURE PREDICTION:



```
[37] import pandas as pd
     import seaborn as sns
     import numpy as np
     from prophet import Prophet
     from matplotlib import pyplot as plt
     from prophet.diagnostics import cross_validation, performance_metrics
     from sklearn.metrics import mean_squared_error, r2_score
     from prophet.plot import plot_cross_validation_metric
```

```
csv = pd.read_csv("/content/Global_Superstore1.csv")
csv
```

	Row ID	Order ID	Order Date	Ship Date	Ship Mode	Customer ID	Customer Name	Segment	City	State	...	Product ID	Category
0	32298	CA-2012-124891	31-07-2012	31-07-2012	Same Day	RH-19495	Rick Hansen	Consumer	New York City	New York	...	TEC-AC-10003033	Technology
1	26341	IN-2013-77878	05-02-2013	07-02-2013	Second Class	JR-16210	Justin Ritter	Corporate	Wollongong	New South Wales	...	FUR-CH-10003950	Furniture
2	25330	IN-2013-71249	17-10-2013	18-10-2013	First Class	CR-12730	Craig Reiter	Consumer	Brisbane	Queensland	...	TEC-PH-10004664	Technology

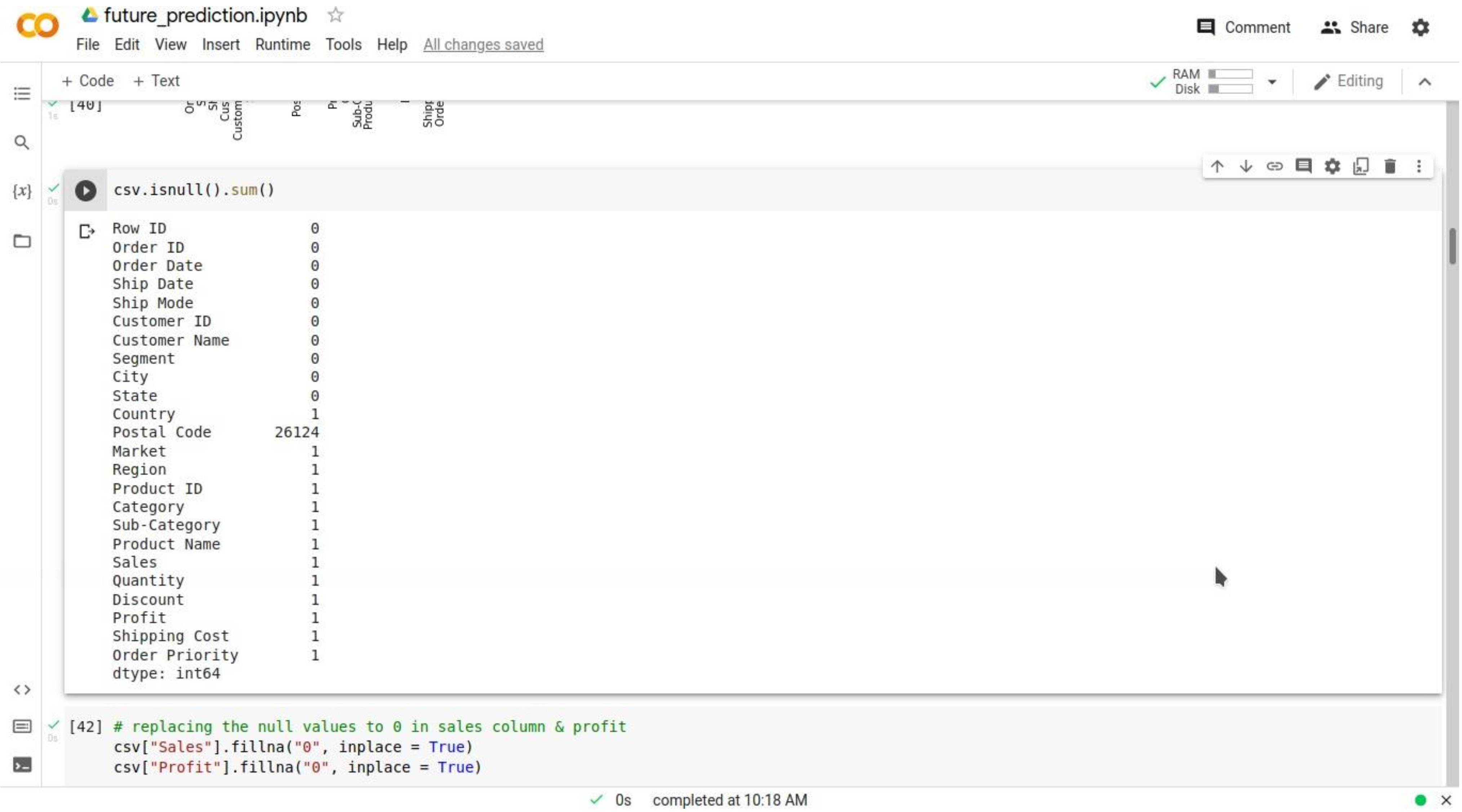


```
csv.columns
```

```
Index(['Row ID', 'Order ID', 'Order Date', 'Ship Date', 'Ship Mode',
       'Customer ID', 'Customer Name', 'Segment', 'City', 'State', 'Country',
       'Postal Code', 'Market', 'Region', 'Product ID', 'Category',
       'Sub-Category', 'Product Name', 'Sales', 'Quantity', 'Discount',
       'Profit', 'Shipping Cost', 'Order Priority'],
      dtype='object')
```

```
# Checking the null values
sns.heatmap(csv.isnull())
```

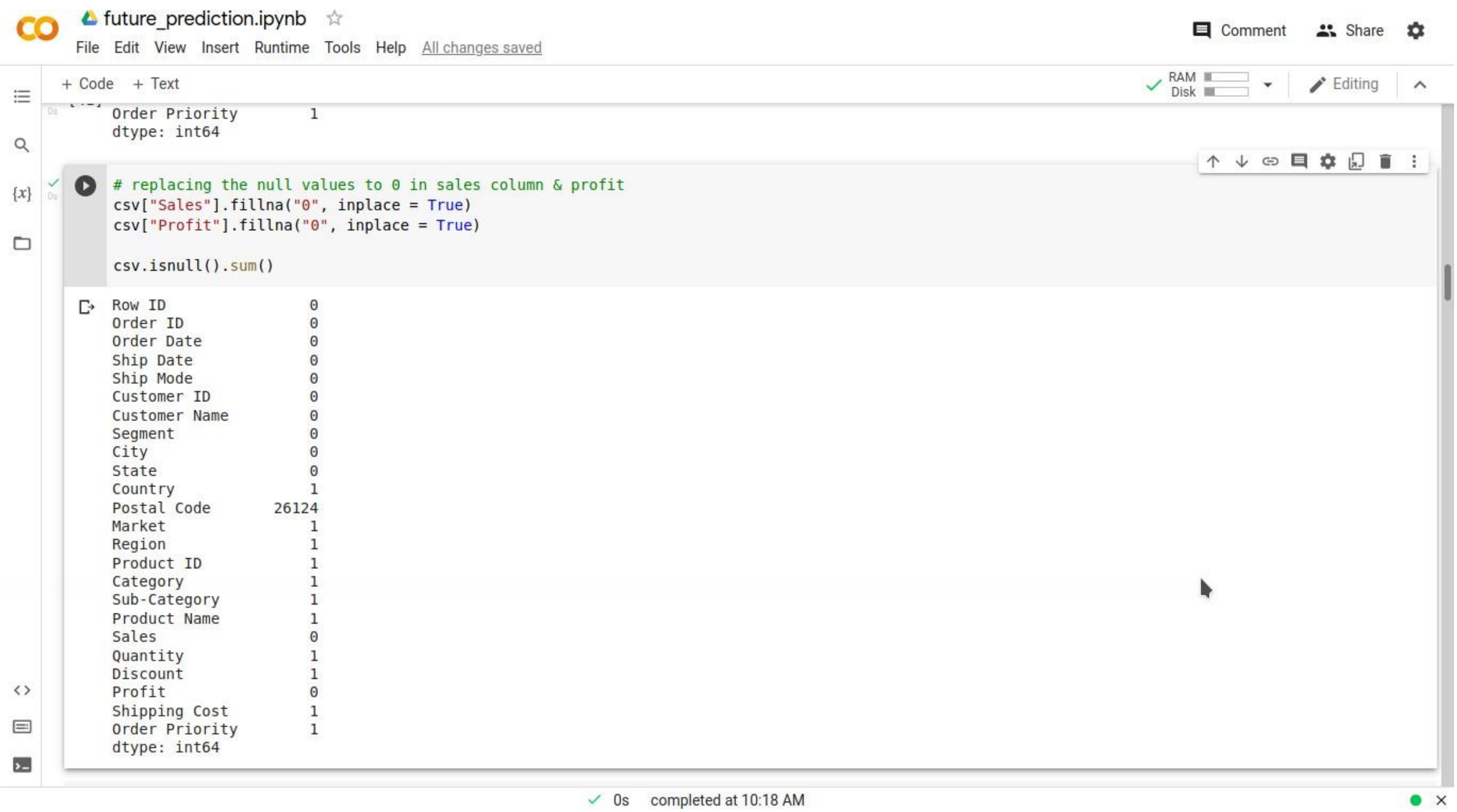
```
<matplotlib.axes._subplots.AxesSubplot at 0x7fba6e04ae50>
```



```
csv.isnull().sum()
```

```
Row ID                0
Order ID              0
Order Date            0
Ship Date             0
Ship Mode             0
Customer ID           0
Customer Name         0
Segment               0
City                  0
State                 0
Country               1
Postal Code       26124
Market                1
Region                1
Product ID            1
Category              1
Sub-Category          1
Product Name          1
Sales                 1
Quantity              1
Discount              1
Profit                1
Shipping Cost         1
Order Priority        1
dtype: int64
```

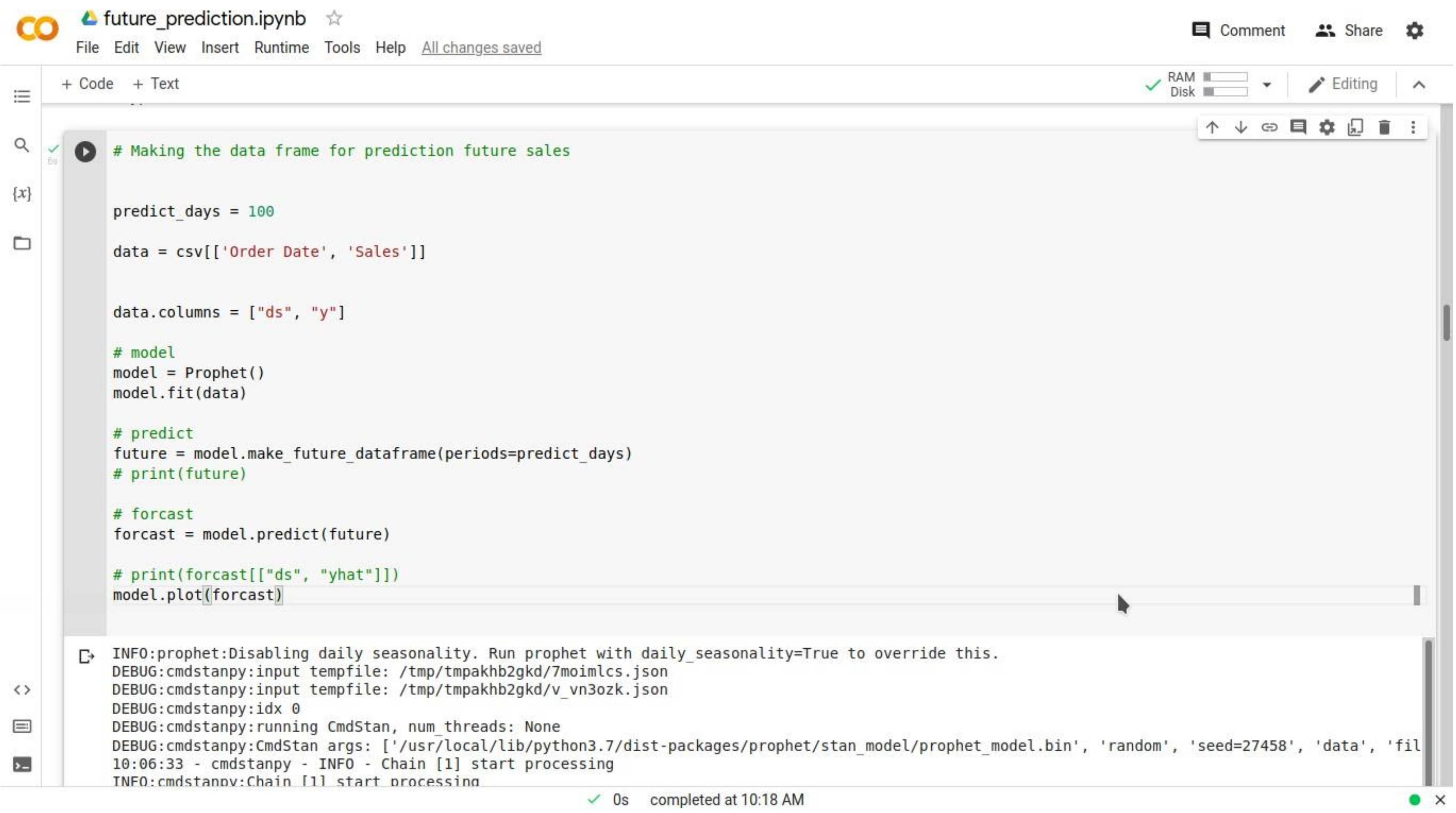
```
[42] # replacing the null values to 0 in sales column & profit
     csv["Sales"].fillna("0", inplace = True)
     csv["Profit"].fillna("0", inplace = True)
```



```
Order Priority       1
dtype: int64
```

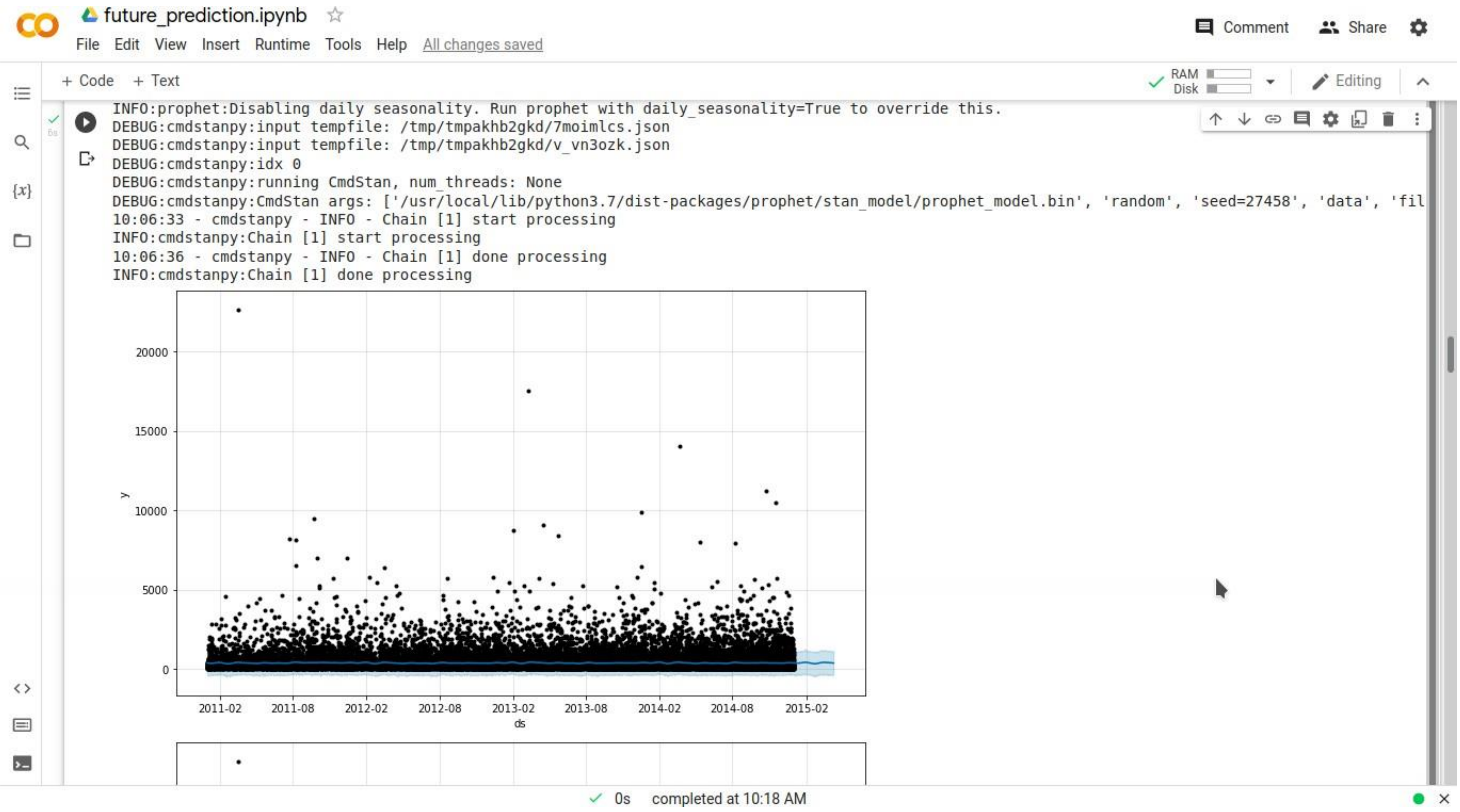
```
# replacing the null values to 0 in sales column & profit
csv["Sales"].fillna("0", inplace = True)
csv["Profit"].fillna("0", inplace = True)

csv.isnull().sum()
```

```
Row ID               0
Order ID             0
Order Date           0
Ship Date            0
Ship Mode            0
Customer ID          0
Customer Name        0
Segment              0
City                 0
State                0
Country              1
Postal Code      26124
Market               1
Region               1
Product ID           1
Category             1
Sub-Category         1
Product Name         1
Sales                0
Quantity             1
Discount             1
Profit               0
Shipping Cost        1
Order Priority       1
dtype: int64
```

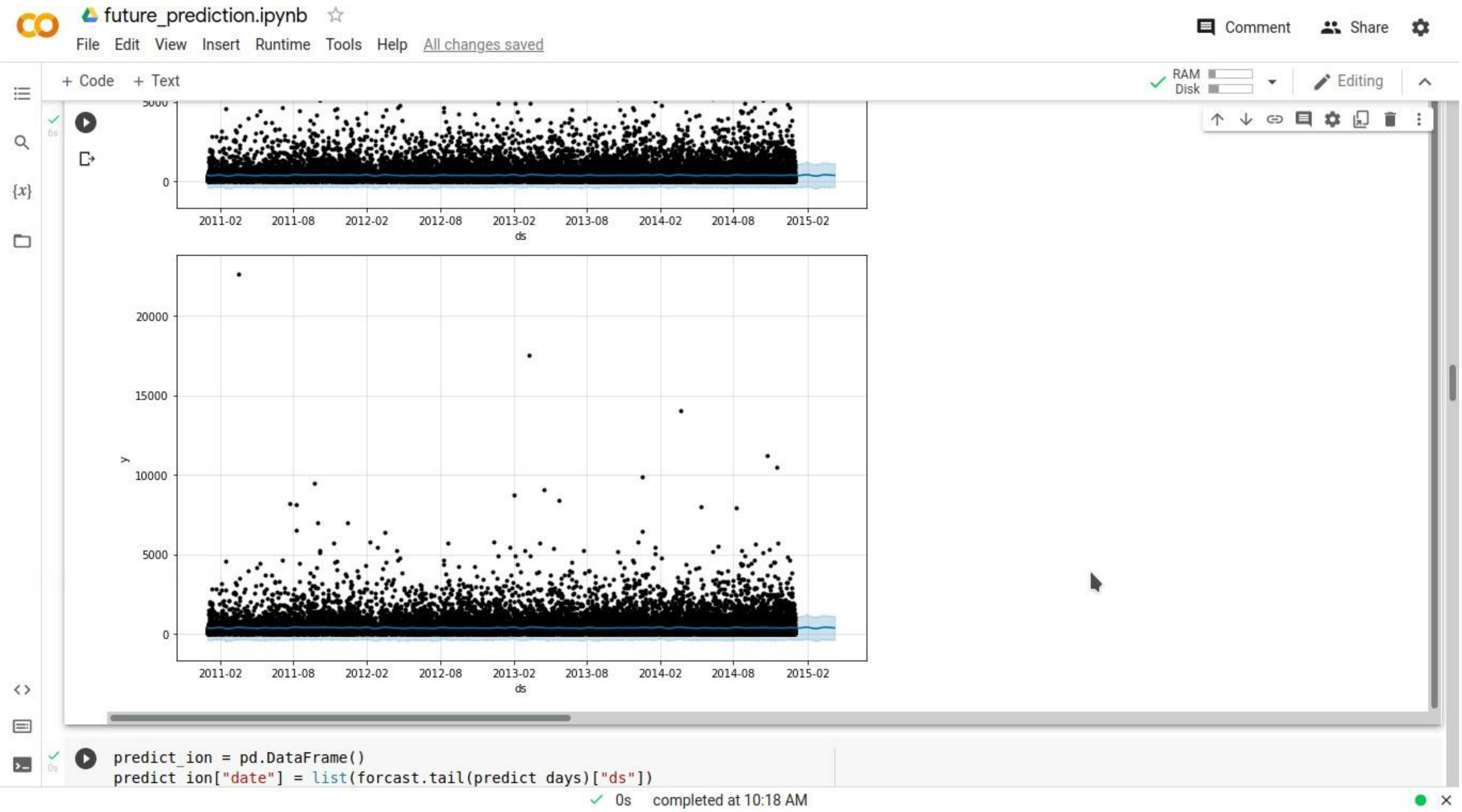


```
# Making the data frame for prediction future sales


predict_days = 100

data = csv[['Order Date', 'Sales']]


data.columns = ["ds", "y"]

# model
model = Prophet()
model.fit(data)

# predict
future = model.make_future_dataframe(periods=predict_days)
# print(future)

# forcast
forcast = model.predict(future)

# print(forcast[["ds", "yhat"]])
model.plot(forcast)
```

```
INFO:prophet:Disabling daily seasonality. Run prophet with daily_seasonality=True to override this.
DEBUG:cmdstanpy:input tempfile: /tmp/tmpakhb2gkd/7moimlcs.json
DEBUG:cmdstanpy:input tempfile: /tmp/tmpakhb2gkd/v_vn3ozk.json
DEBUG:cmdstanpy:idx 0
DEBUG:cmdstanpy:running CmdStan, num_threads: None
DEBUG:cmdstanpy:CmdStan args: ['/usr/local/lib/python3.7/dist-packages/prophet/stan_model/prophet_model.bin', 'random', 'seed=27458', 'data', 'fil
10:06:33 - cmdstanpy - INFO - Chain [1] start processing
INFO:cmdstanpy:Chain [1] start processing
```

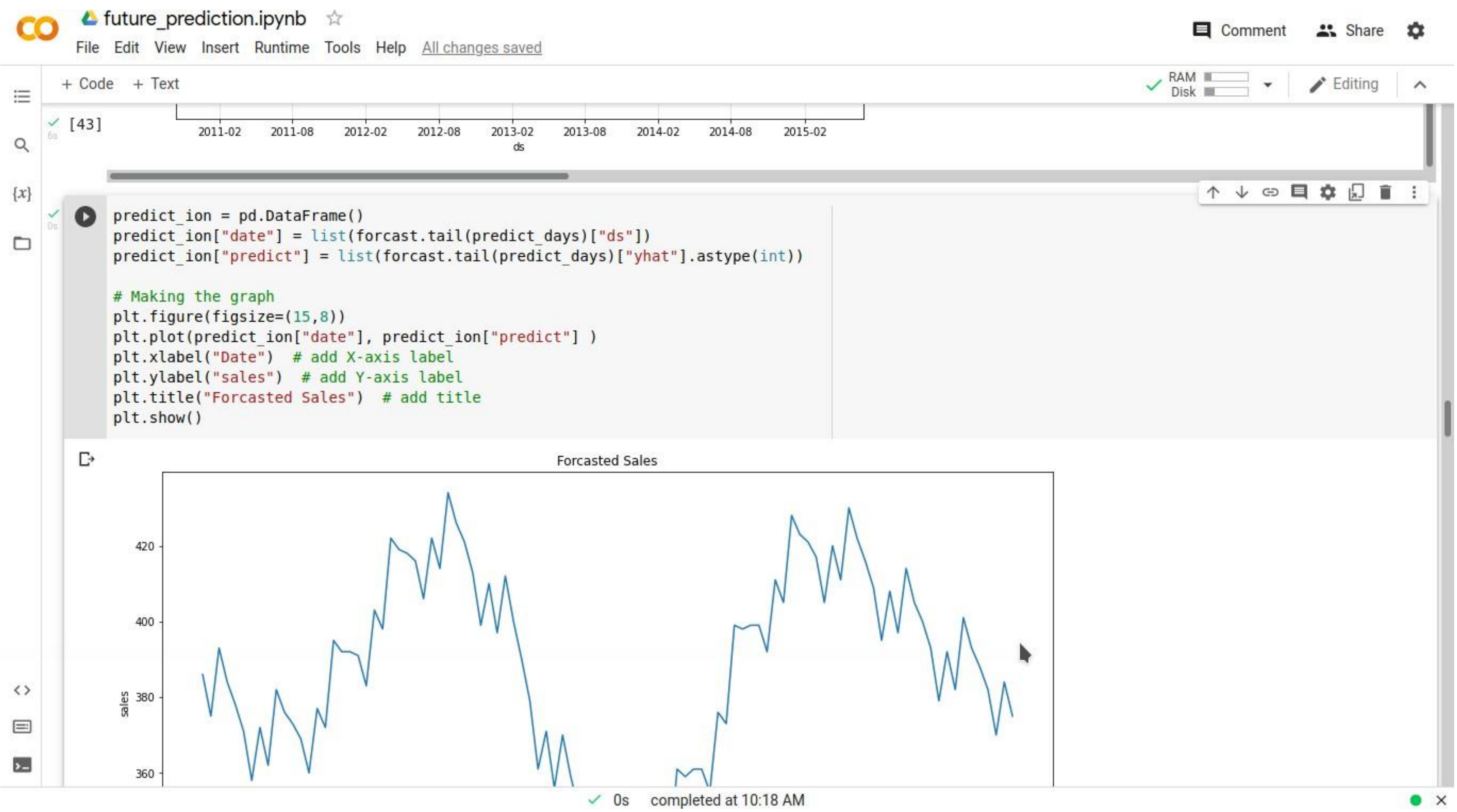


```
INFO:prophet:Disabling daily seasonality. Run prophet with daily_seasonality=True to override this.
DEBUG:cmdstanpy:input tempfile: /tmp/tmpakhb2gkd/7moimlcs.json
DEBUG:cmdstanpy:input tempfile: /tmp/tmpakhb2gkd/v_vn3ozk.json
DEBUG:cmdstanpy:idx 0
DEBUG:cmdstanpy:running CmdStan, num_threads: None
DEBUG:cmdstanpy:CmdStan args: ['/usr/local/lib/python3.7/dist-packages/prophet/stan_model/prophet_model.bin', 'random', 'seed=27458', 'data', 'fil
10:06:33 - cmdstanpy - INFO - Chain [1] start processing
INFO:cmdstanpy:Chain [1] start processing
10:06:36 - cmdstanpy - INFO - Chain [1] done processing
INFO:cmdstanpy:Chain [1] done processing
```



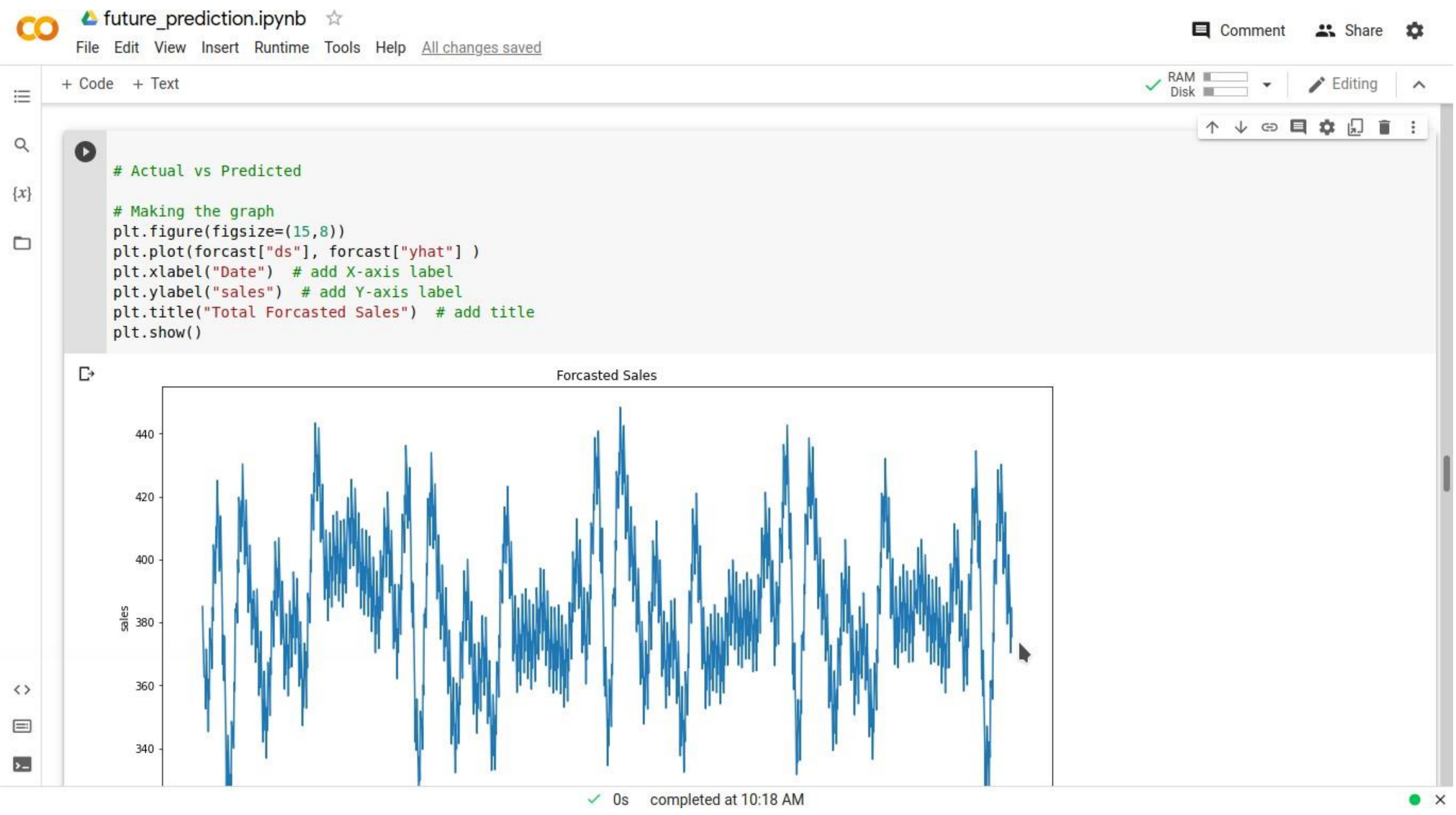
```
predict_ion = pd.DataFrame()
predict_ion["date"] = list(forcast.tail(predict_days)["ds"])
```

✓ 0s completed at 10:18 AM

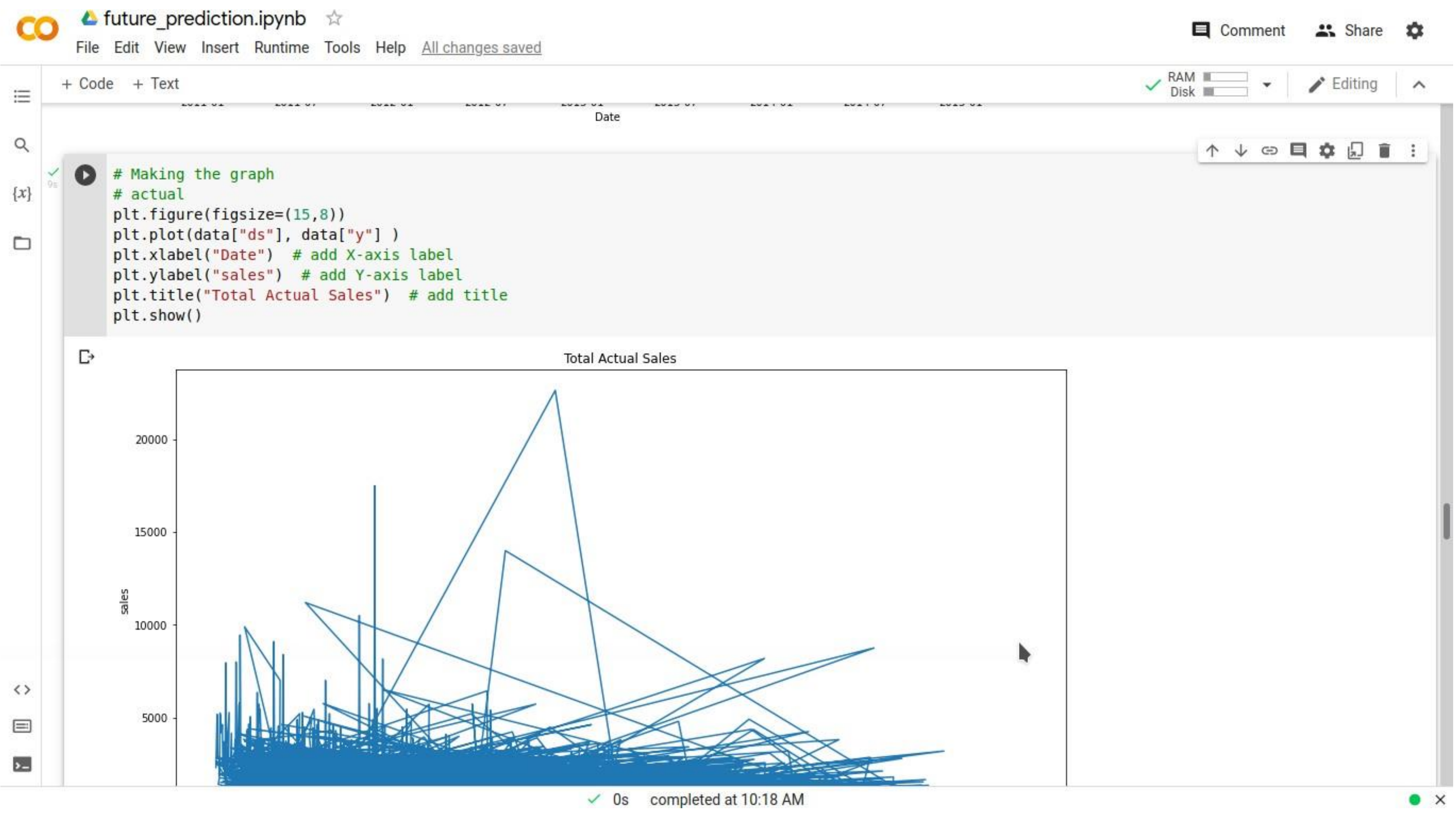


```
predict_ion = pd.DataFrame()
predict_ion["date"] = list(forcast.tail(predict_days)["ds"])
predict_ion["predict"] = list(forcast.tail(predict_days)["yhat"].astype(int))

# Making the graph
plt.figure(figsize=(15,8))
plt.plot(predict_ion["date"], predict_ion["predict"] )
plt.xlabel("Date")  # add X-axis label
plt.ylabel("sales")  # add Y-axis label
plt.title("Forcasted Sales")  # add title
plt.show()
```

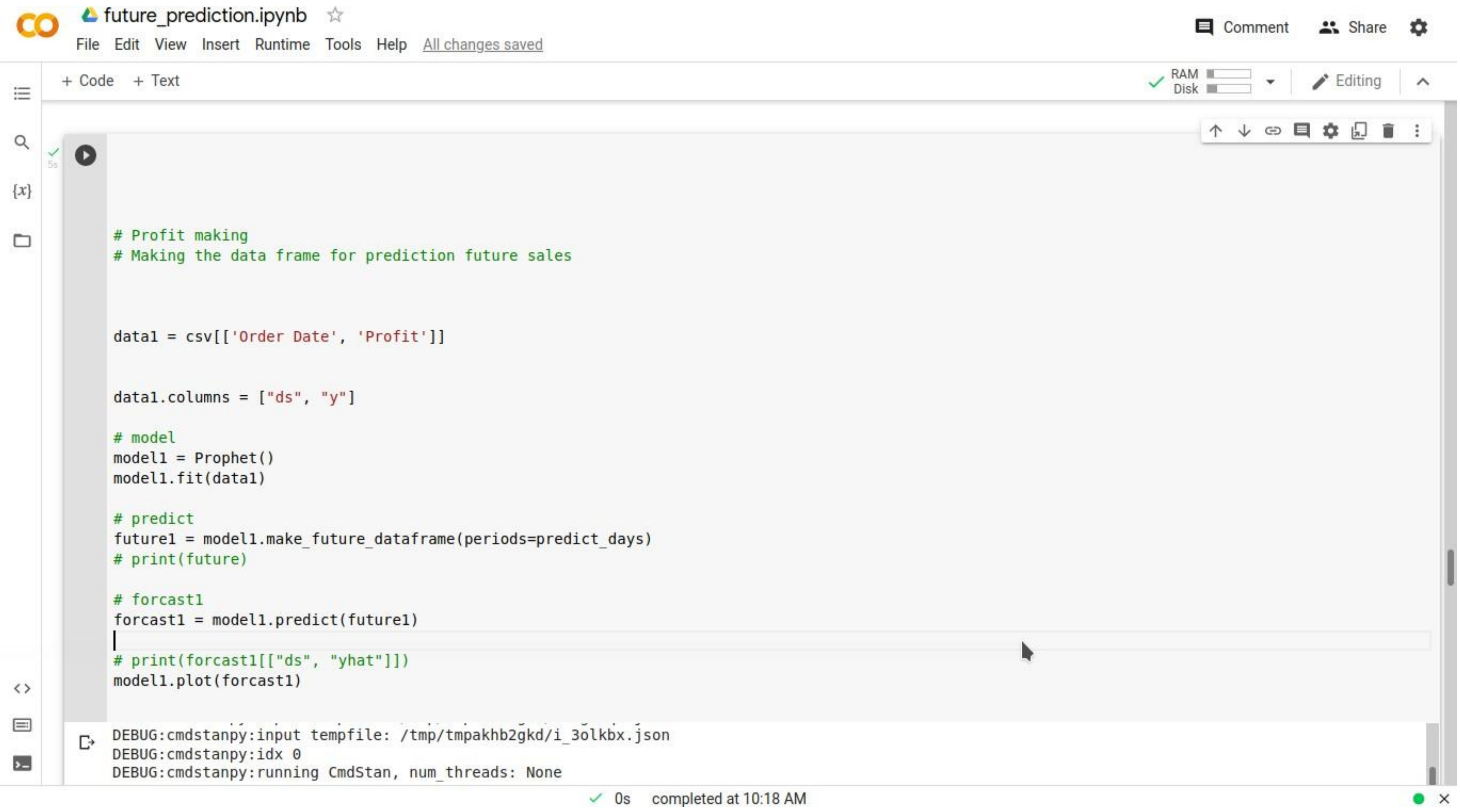
✓ 0s completed at 10:18 AM



```
# Actual vs Predicted

# Making the graph
plt.figure(figsize=(15,8))
plt.plot(forcast["ds"], forcast["yhat"] )
plt.xlabel("Date")  # add X-axis label
plt.ylabel("sales")  # add Y-axis label
plt.title("Total Forcasted Sales")  # add title
plt.show()
```

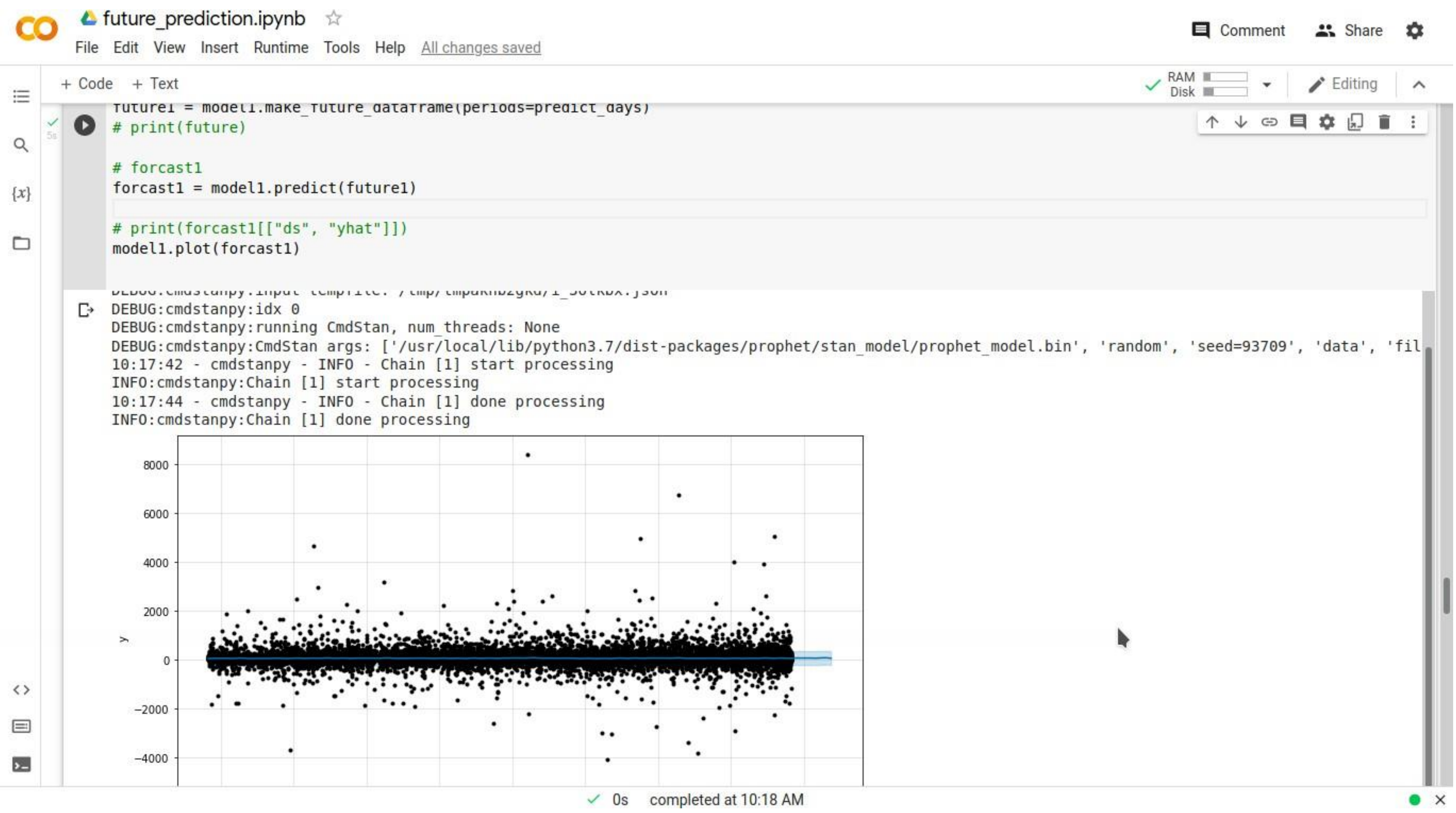


```
# Making the graph
# actual
plt.figure(figsize=(15,8))
plt.plot(data["ds"], data["y"] )
plt.xlabel("Date")  # add X-axis label
plt.ylabel("sales")  # add Y-axis label
plt.title("Total Actual Sales")  # add title
plt.show()
```



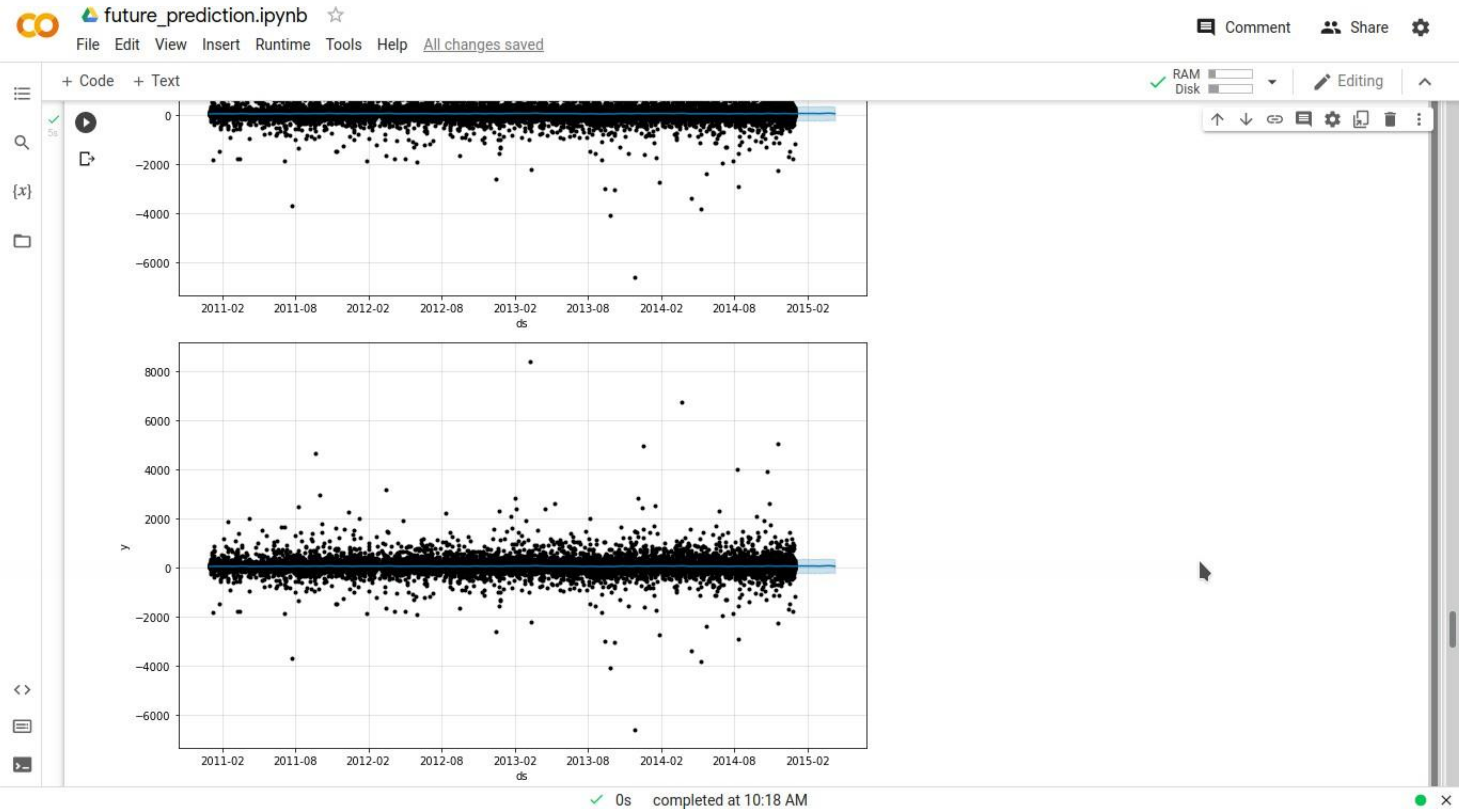
```
# Profit making
# Making the data frame for prediction future sales



data1 = csv[['Order Date', 'Profit']]


data1.columns = ["ds", "y"]

# model
model1 = Prophet()
model1.fit(data1)

# predict
future1 = model1.make_future_dataframe(periods=predict_days)
# print(future)

# forcast1
forcast1 = model1.predict(future1)

# print(forcast1[["ds", "yhat"]])
model1.plot(forcast1)
```

```
DEBUG:cmdstanpy:input tempfile: /tmp/tmpakhb2gkd/i_3olkbx.json
DEBUG:cmdstanpy:idx 0
DEBUG:cmdstanpy:running CmdStan, num_threads: None
```

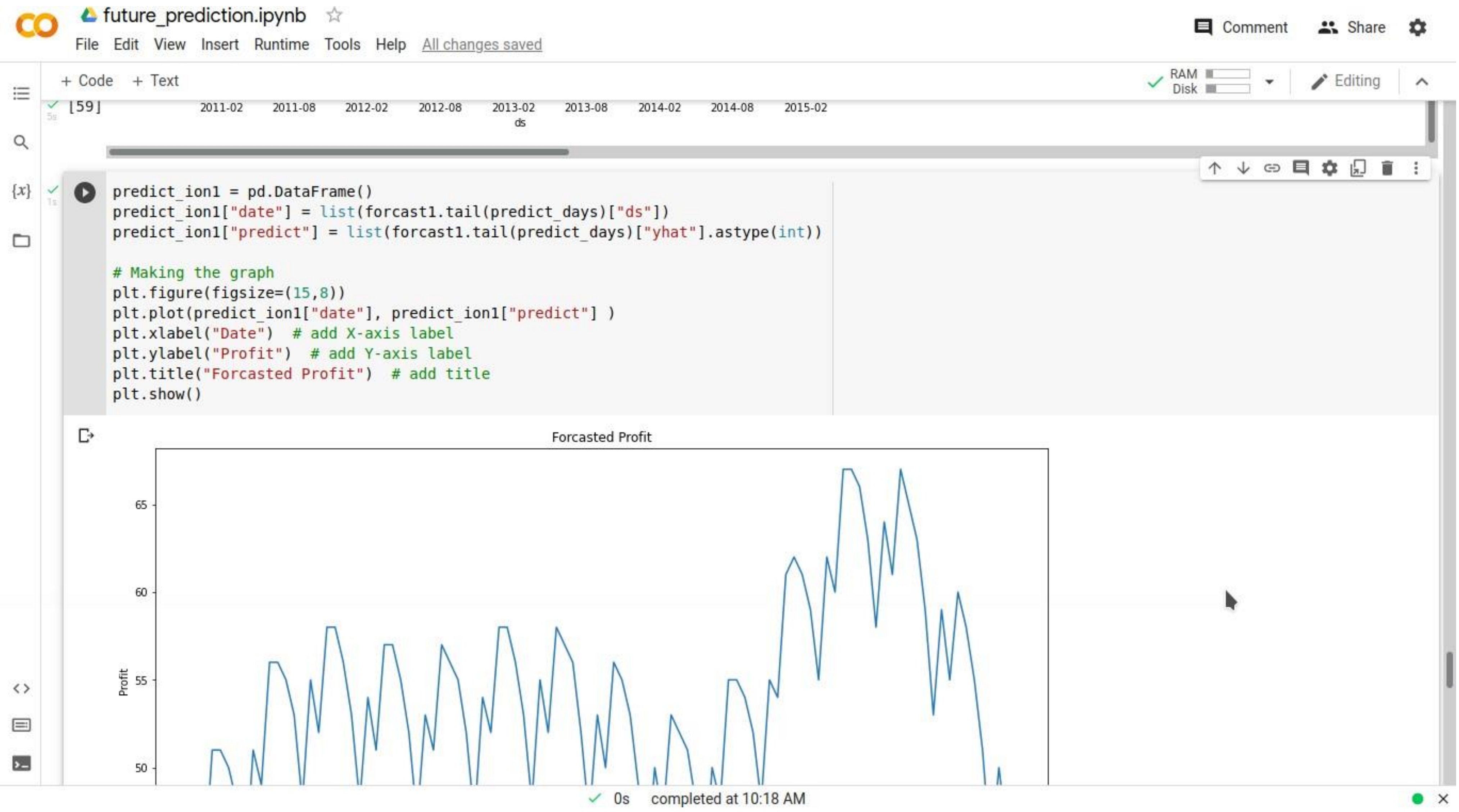


```
future1 = model1.make_future_dataframe(periods=predict_days)
# print(future)

# forcast1
forcast1 = model1.predict(future1)

# print(forcast1[["ds", "yhat"]])
model1.plot(forcast1)
```

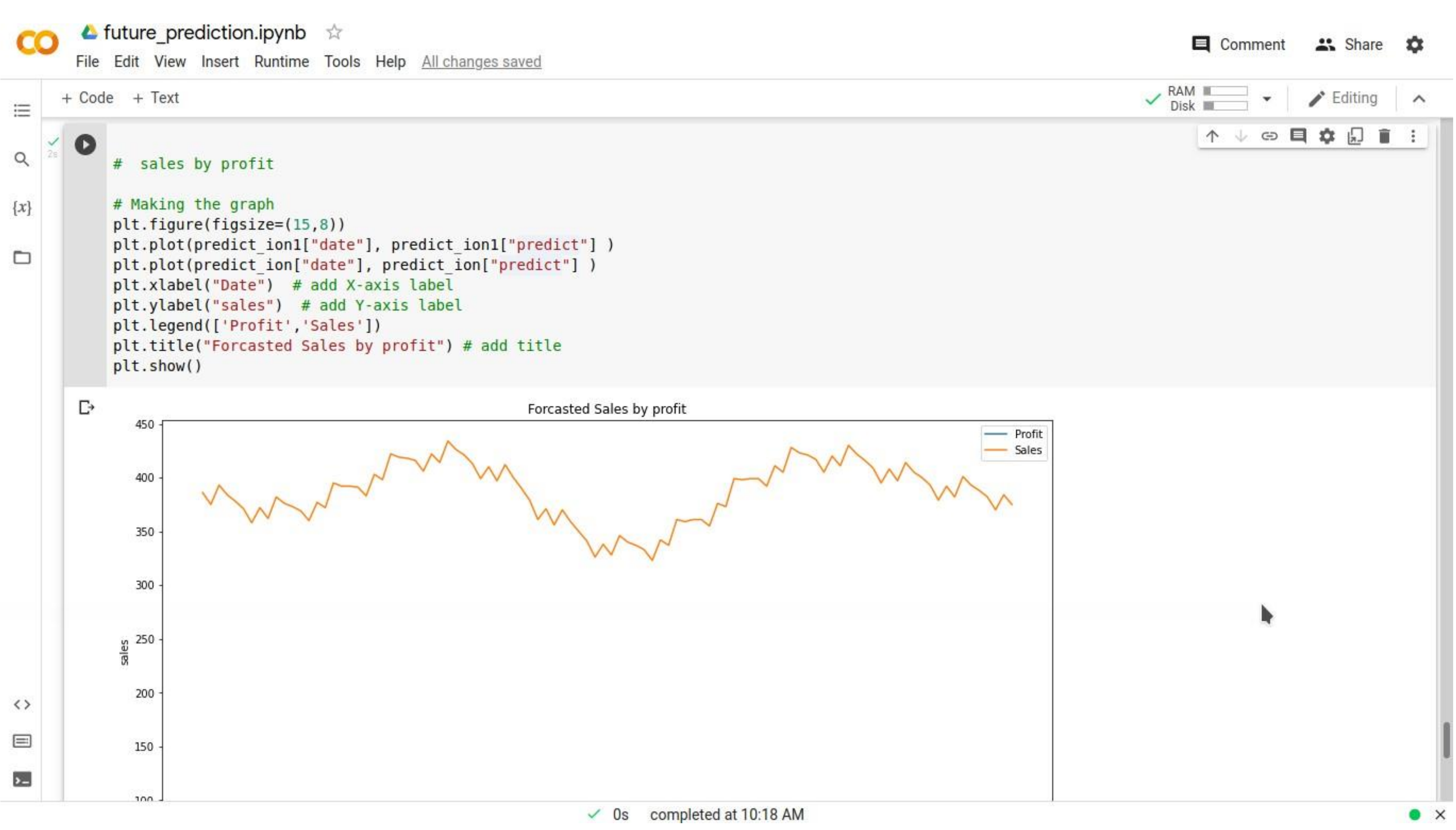
```
DEBUG:cmdstanpy:input tempfile: /tmp/tmpakhbzgkd/1_30tkbx.json
DEBUG:cmdstanpy:idx 0
DEBUG:cmdstanpy:running CmdStan, num_threads: None
DEBUG:cmdstanpy:CmdStan args: ['/usr/local/lib/python3.7/dist-packages/prophet/stan_model/prophet_model.bin', 'random', 'seed=93709', 'data', 'fil
10:17:42 - cmdstanpy - INFO - Chain [1] start processing
INFO:cmdstanpy:Chain [1] start processing
10:17:44 - cmdstanpy - INFO - Chain [1] done processing
INFO:cmdstanpy:Chain [1] done processing
```



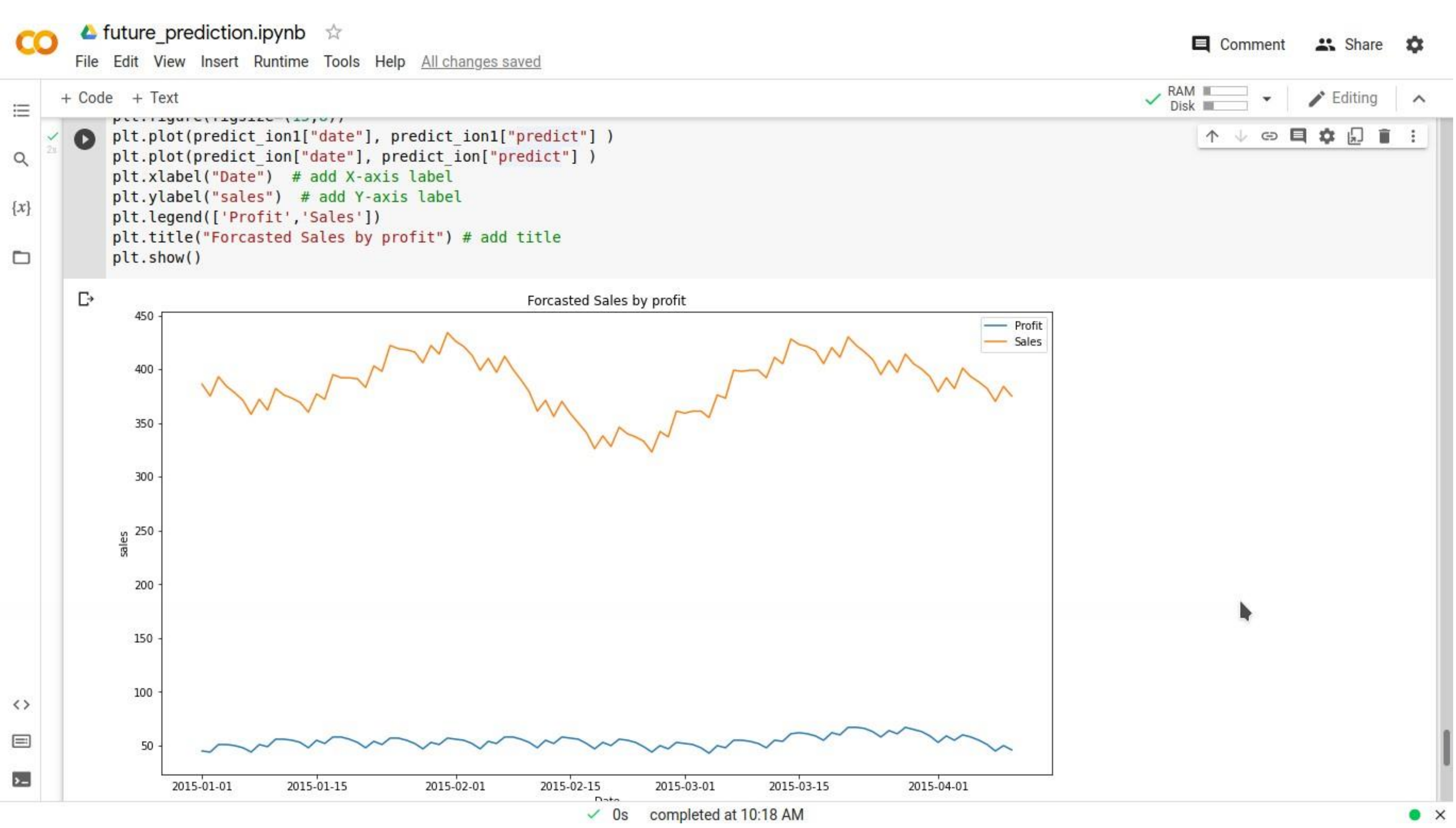
✓ 0s completed at 10:18 AM



```
predict_ion1 = pd.DataFrame()
predict_ion1["date"] = list(forcast1.tail(predict_days)["ds"])
predict_ion1["predict"] = list(forcast1.tail(predict_days)["yhat"].astype(int))

# Making the graph
plt.figure(figsize=(15,8))
plt.plot(predict_ion1["date"], predict_ion1["predict"] )
plt.xlabel("Date")  # add X-axis label
plt.ylabel("Profit")  # add Y-axis label
plt.title("Forcasted Profit")  # add title
plt.show()
```



```
#  sales by profit

# Making the graph
plt.figure(figsize=(15,8))
plt.plot(predict_ion1["date"], predict_ion1["predict"] )
plt.plot(predict_ion["date"], predict_ion["predict"] )
plt.xlabel("Date")  # add X-axis label
plt.ylabel("sales")  # add Y-axis label
plt.legend(['Profit','Sales'])
plt.title("Forcasted Sales by profit") # add title
plt.show()
```



```
plt.figure(figsize=(15,8))
plt.plot(predict_ion1["date"], predict_ion1["predict"] )
plt.plot(predict_ion["date"], predict_ion["predict"] )
plt.xlabel("Date")  # add X-axis label
plt.ylabel("sales")  # add Y-axis label
plt.legend(['Profit','Sales'])
plt.title("Forcasted Sales by profit") # add title
plt.show()
```