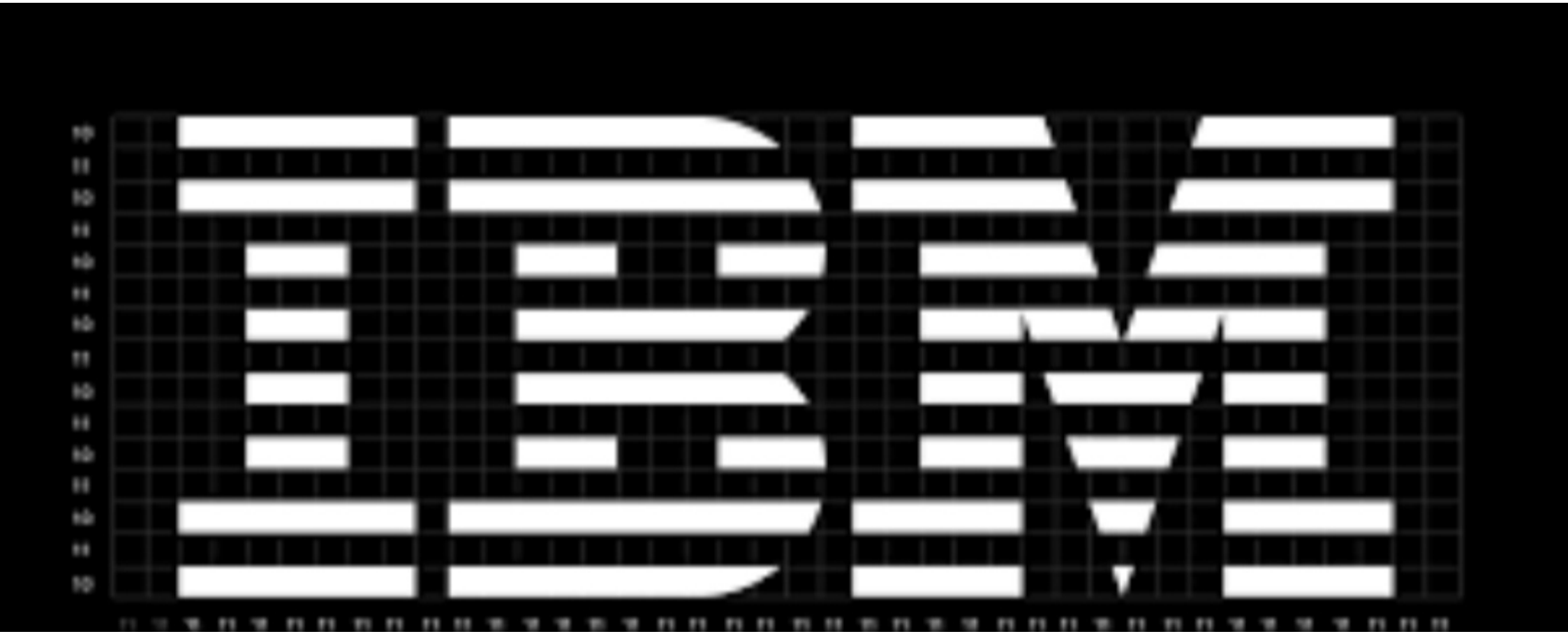

GROUP 5

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Revitalizing Urban Mobility: Unveiling the Algorithmic Wizardry Behind Public Transport Efficiency

Introduction

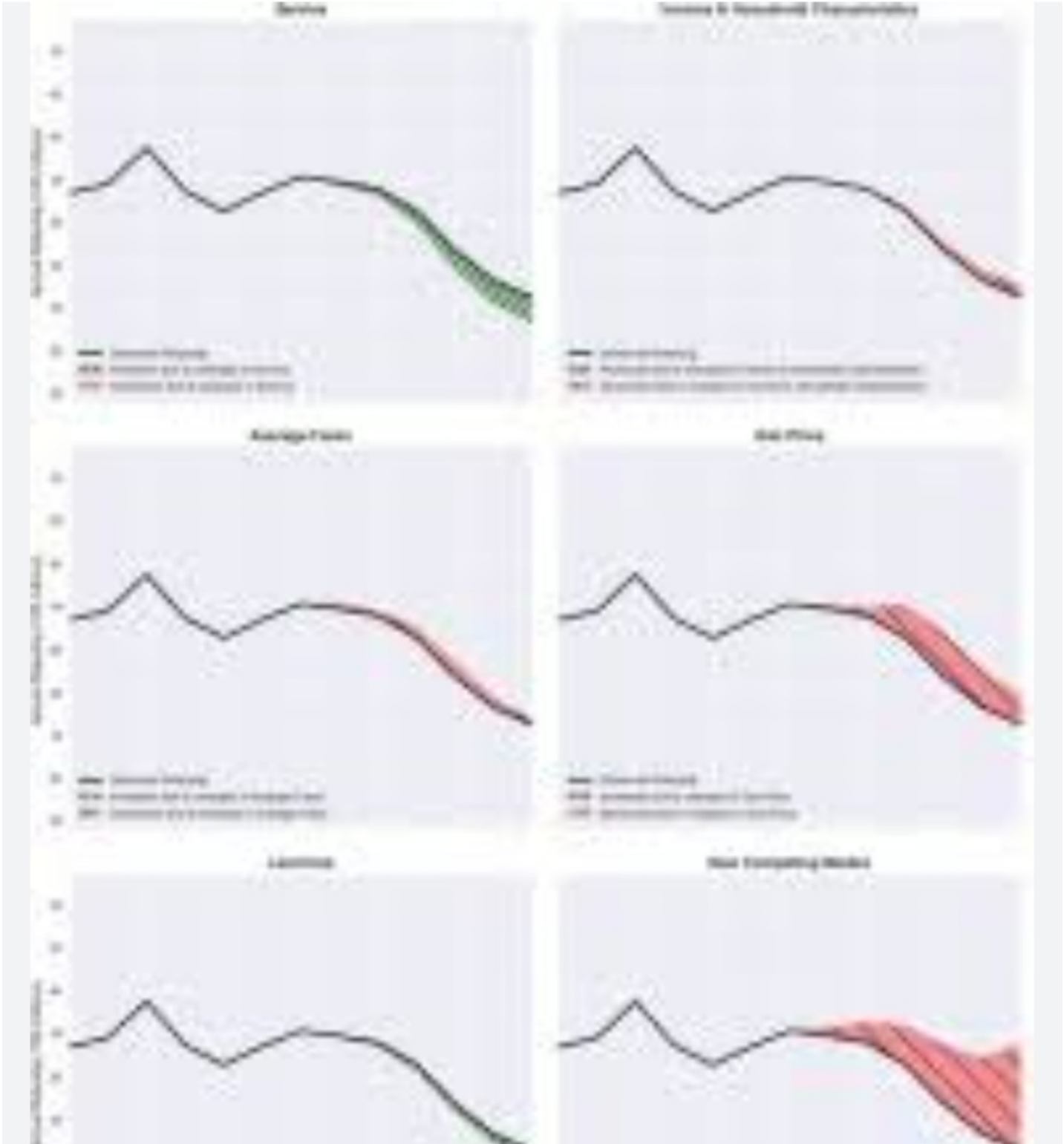
Welcome to the world of *algorithmic wizardry* in **urban mobility**! Join us as we unveil the secrets behind the **efficiency** of public transport. Discover how cutting-edge algorithms are transforming the way we move around cities, making transportation smarter and more sustainable.

The Urban Mobility Challenge

Cities face the daunting challenge of providing **efficient** and **reliable** public transport systems. With increasing urbanization, there is a need for innovative solutions to combat congestion and improve accessibility. This slide explores the key issues faced by urban mobility and sets the stage for the algorithmic wizardry that follows.

Algorithmic Optimization

Enter the realm of **algorithmic optimization**! Discover how advanced algorithms analyze **data** on passenger demand, traffic patterns, and infrastructure to optimize public transport routes, schedules, and capacity. By leveraging the power of algorithms, cities can achieve **efficiency**, reduce travel times, and enhance the overall passenger experience.



Smart Ticketing and Fare Systems

Step into the world of **smart ticketing**! Learn how algorithms power contactless payment systems, fare calculation, and passenger analytics. Discover how these systems enhance convenience, reduce fraud, and provide valuable insights for transport planners. Embrace the future of urban mobility, where algorithms make the ticketing process seamless and efficient.

Real-Time Data Integration

In the era of **real-time data**, public transport systems can adapt dynamically to changing conditions. Explore how algorithms integrate data from sensors, GPS, and passenger feedback to optimize routes in real-time. This enables cities to respond to disruptions, minimize delays, and ensure a seamless experience for commuters.

jupyter Untitled29 Last Checkpoint: 25 minutes ago Autosave Failed!

File Edit View Insert Cell Kernel Widgets Help

Run Code

```
797         # Binary mode
798         handle = open(handle, ioargs.mode)
```

FileNotFoundError: [Errno 2] No such file or directory: 'C:\\Users\\PREETHI PC\\

In [4]:
```
import skimage
```

In [5]:
```
import pandas as pd
```

In [7]:
```
df = pd.read_csv('C:\\Users\PREETHI PC\\Documents\\ms excel\\transport.csv')
```

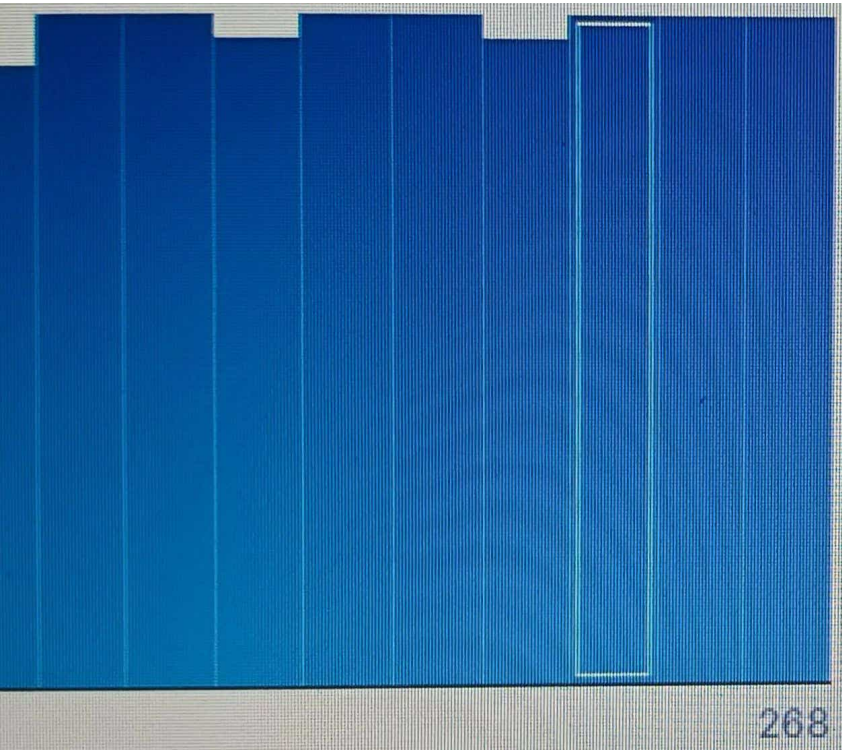
In [8]:
```
print(df)
```

```
      Column1      column2     column3     column4 column5 column6  \
0  product id   product id  product id  product id    wald      df
1      AX 901     -0.07782          51     average       1     NaN
2       AD890      0.08219          71        less       8     NaN
3      CG6701     0.028218          90       heigh       9     NaN
4    GH 67101      0.0.291          70        less       8     NaN
5     HS 5401       0.0828          40        high       5     NaN
6      JSA672       0.0288          90     average       9     NaN
7    HSJ 7801         9220          60        less      10     NaN
8    JJS 0988        0.289          89        less      98     NaN
9     HDUJ033          209          70        less      82     NaN
10    UIEJ022         9202         620        less       7     NaN
11    IOI 289          920         839        less       2     NaN
12    HAS 829         2902          80     average       7     NaN
```

In [*]:
```
import numpay as np
from skimage import io,data
```

In [*]:
```
image = data.transport()

io.imshow(image);()
```



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Mismatched	0	0%
Missing	0	0%
Mean	135	
Std. Deviation	76.8	
Quantiles	1	Min
	69	25%
	136	50%
	202	75%
	268	Max

```python
import numpy as np
a = np.array([0, 1, 2, 3])          # Create a rank 1 array
print(a)                            #print array a
print(type(a))                      #type of array a
print(a.ndim)                       #dimension of array a
print(a.shape)                      #shape(row,column) of array a
print(len(a))                       #length of array a
```

	B	C	D	E	F	G	H	I
ct id	unit price	customer id	pollution level	wald	df	sig.	variables	estimate
1	-0.07782		51 average		1		1 quality	
0	0.08219		71 less		8		1 inconsistency	2.8
01	0.028218		90 heigh		9		1 loyalty	8.0
7101	0.0.291		70 less		8		1 frequency	20
401	0.0828		40 high		5		1 constant	2922.
672	0.0288		90 average		9		1 very unpleasant	0.24
7801	9220		60 less		10		1 unpleasent	0.456
0988	0.289		89 less		98		1 average	0.737
UJ033	209		70 less		82		1 pleasant	0.788
EJ022	9202		620 less		7		1 very pleasant	0.89
I 289	920		839 less		2		1 depentend	0.8728
AS 829	2902		80 average		7		1 defined	0.891
KSD 810	9200		90 high		6		1 vuarlity	0.998
SJK 198	290902		90 high		2		1 fall ride	0.899
YIUW 809	8218		9090 high		9		1 hydric engine	0.8991
WUJ 129	2802		90 less		9		1 temporaily	0.8919
KWJ 998	289290		322 less		4		1 primarily	0.8728
JWJ 891	29820		8909 average		1		1 constant	0.91998
GAJK5671	5176791		179801 less		7		1 constant	0.7918
FHA26601	72818		178801 average		3		1 pleasant	0.81989
JHKJ07888	78989		19891 less		2		1 unpleasent	0.71991

Towards a Sustainable Future

As we conclude our journey into the algorithmic wizardry behind public transport efficiency, envision a future of **sustainable mobility**. By harnessing the power of algorithms, cities can reduce carbon emissions, promote multimodal transportation, and create a more livable urban environment. Join us in shaping a future where smart algorithms pave the way for a greener and more connected world.

Conclusion

In this presentation, we explored the fascinating world of algorithmic wizardry in urban mobility. We discovered how algorithms optimize public transport, integrate real-time data, revolutionize ticketing systems, and contribute to a sustainable future. Embrace the power of algorithms and join us in transforming urban mobility into a seamless, efficient, and environmentally friendly experience for all.

Thanks!

Do you have any queries

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