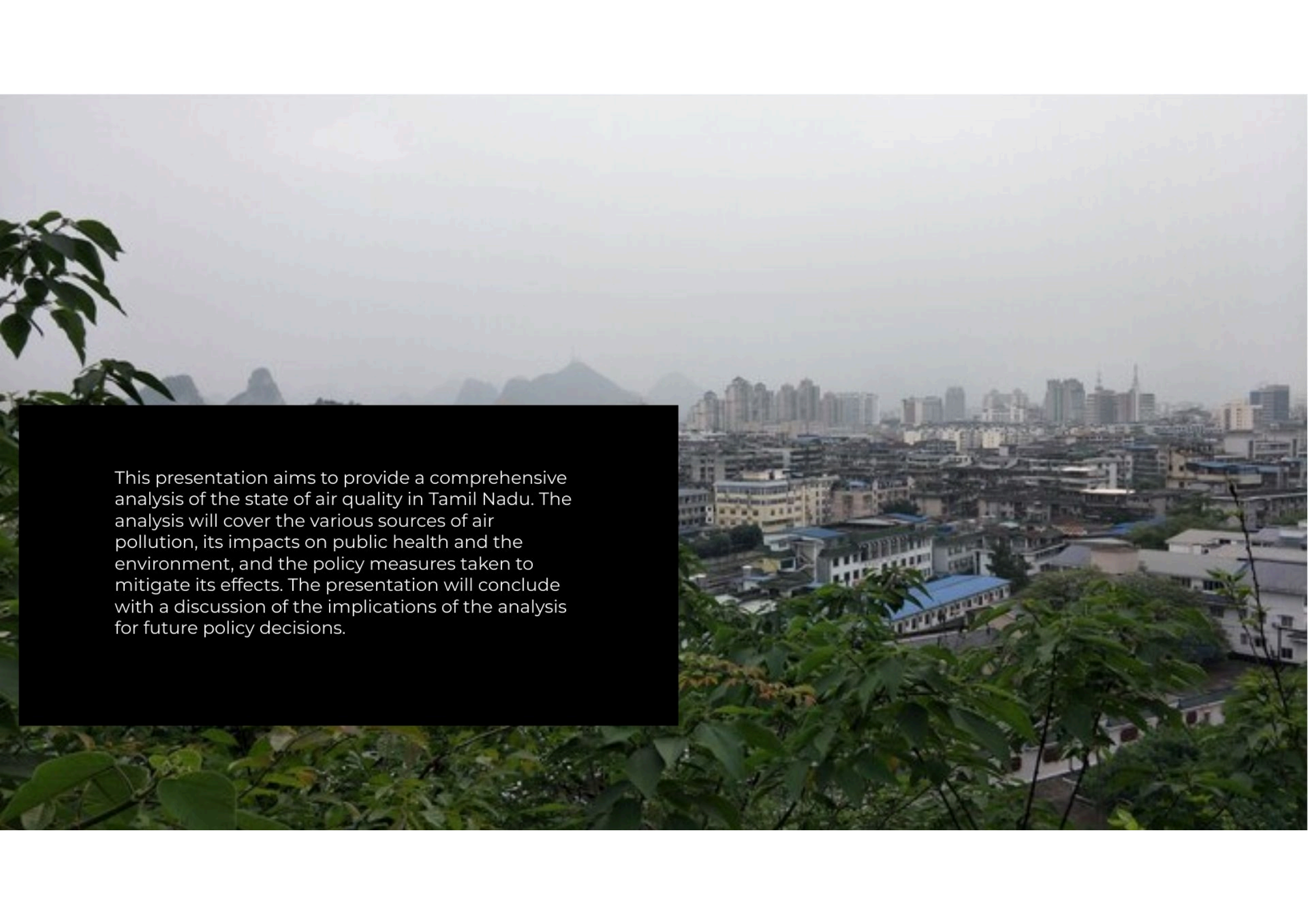# Air Quality Analysis In Tamilnadu

This presentation aims to provide a comprehensive analysis of the state of air quality in Tamil Nadu. The analysis will cover the various sources of air pollution, its impacts on public health and the environment, and the policy measures taken to mitigate its effects. The presentation will conclude with a discussion of the implications of the analysis for future policy decisions.

# About the project

Exposure to air pollution has been linked to a range of health problems, including respiratory diseases, cardiovascular diseases, and cancer. Children, the elderly, and low-income communities are particularly vulnerable. The economic costs of air pollution, including healthcare costs and lost productivity, are also significant.
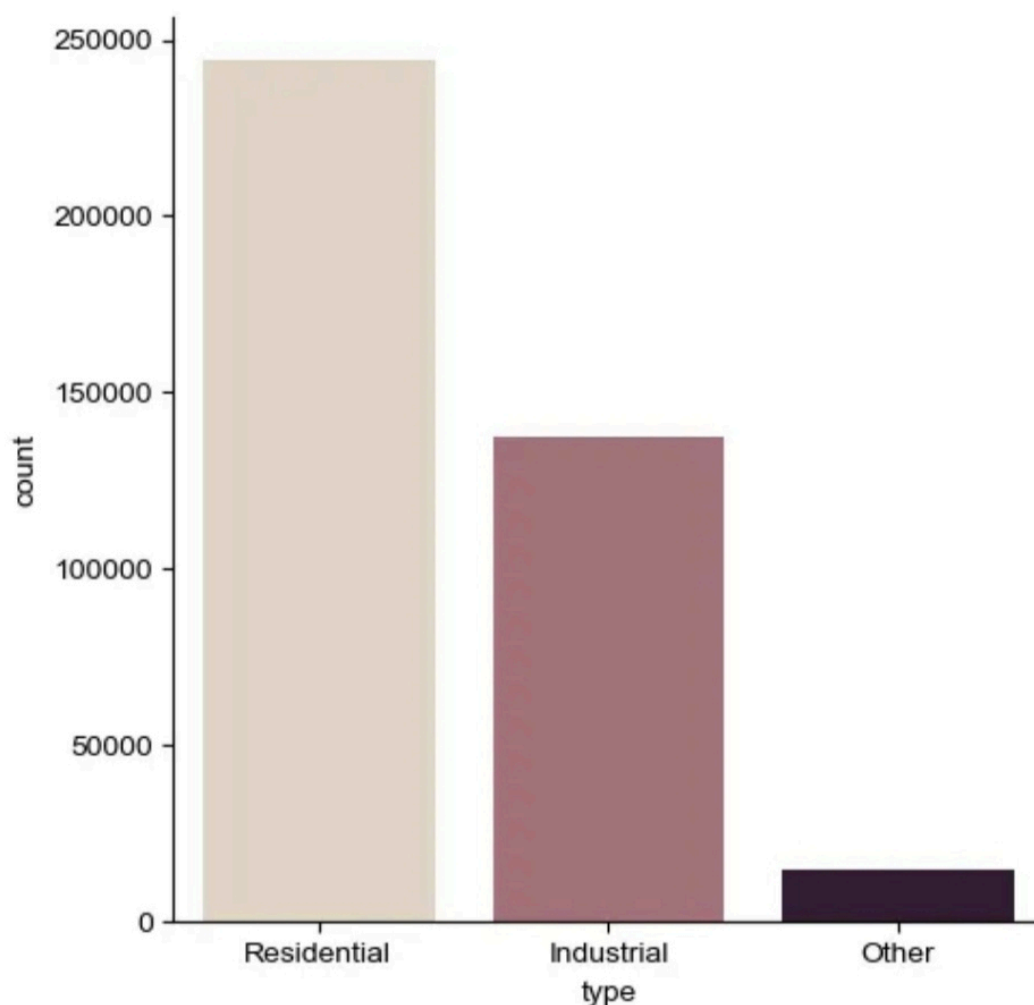
# Now let us see how our data looks :

```
In [3]: df.info()
<class 'pandas.core.frame.DataFrame'>
Int64Index: 396157 entries, 0 to 435738
Data columns (total 10 columns):
state        396157 non-null object
location     396157 non-null object
type         396157 non-null object
so2          396157 non-null float64
no2          394176 non-null float64
rspm         366514 non-null float64
spm          167983 non-null float64
pm2_5        9195 non-null float64
date         396157 non-null datetime64[ns]
year         396157 non-null int32
dtypes: datetime64[ns](1), float64(5), int32(1), object(3)
memory usage: 31.7+ MB
```

Dataset after deleting the rows which had null values in so2, location
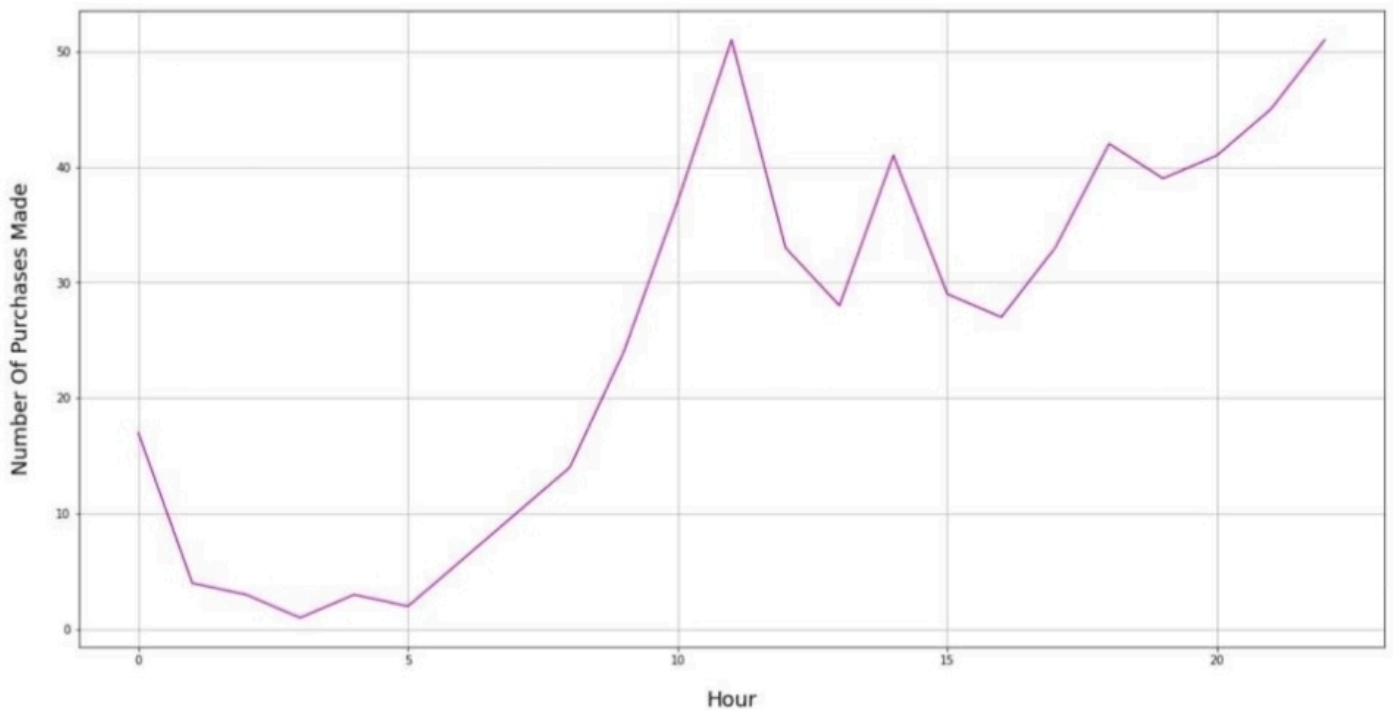
```
In [11]: df['type'].value_counts()
Out[11]:
Residential     244017
Industrial      137420
Other            14724
Name: type, dtype: int64
```

Now it looks much better and cleaner. We can visualize the *type* attribute using cat plots.



the plot of Number of entries vs Categories in the type column

## Sales Happening Per Hour (Spread Throughout The Week)



The results are indicative of how sales typically peak in late evening hours prominently, and this data can be incorporated into business decisions to promote a product during that time specifically.

# Environmental Impacts

# Conclusion

## Where we are

In conclusion, the analysis presented in this presentation highlights the serious nature of air pollution in Tamil Nadu and the urgent need for action. The government, industry, and individuals all have a role to play in reducing air pollution and its harmful effects. By working together, we can create a cleaner and healthier environment for all.

# THANK YOU