



# Australia

# Road Fatal Crashes

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who is **WHO**?

## World Health Organization

is a specialized agency of United Nations that is concerned with international public health

It considers road fatal crashes as health community issue and recommends making it a political priority

So what is the response of Australia to WHO's recommendation?



The focus of this study is twofold

to address the **loss of life**  
in traffic accidents

affect the **functionality**  
**of whole cities**





# Goal

to encourage and motivate  
people, industries and government  
towards safer Australia roads





“Can *Australia* continue to  
*reduce* further the  
number of road fatalities?”

So I *will predict* if Australia can reduce the  
number of road fatalities.

# Data Source and Cleaning

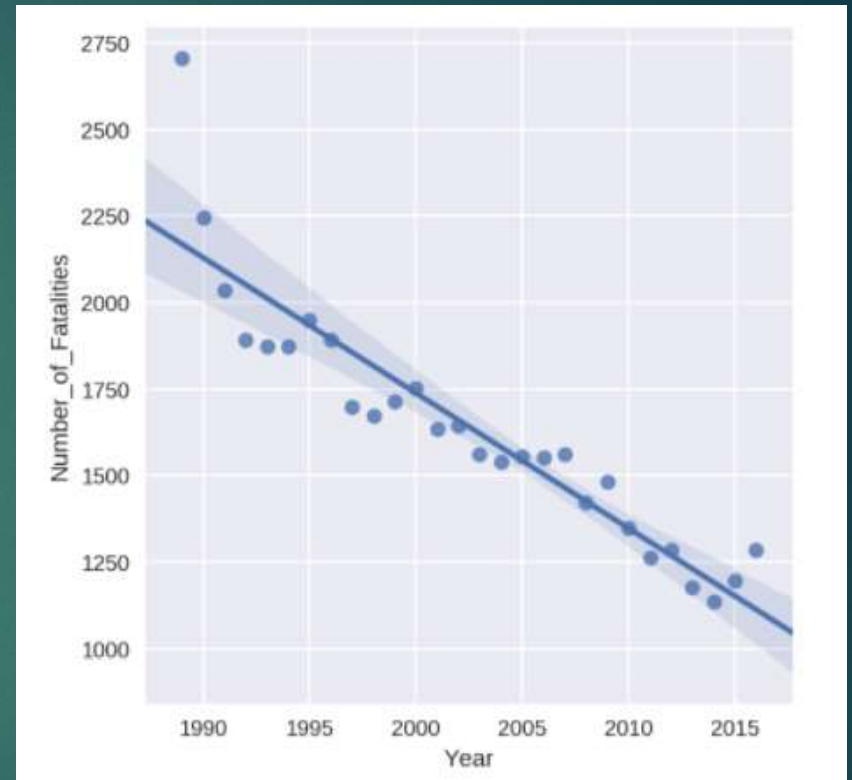
- Data came from Department of Infrastructure and Regional Development.
- Data is from year 1989 to 2016
- Clean the data.
- Check for null values.
- Check for outliers.
- Load in database for safe keep and retrieval.



# Methodology

Machine Learning (Linear regression)

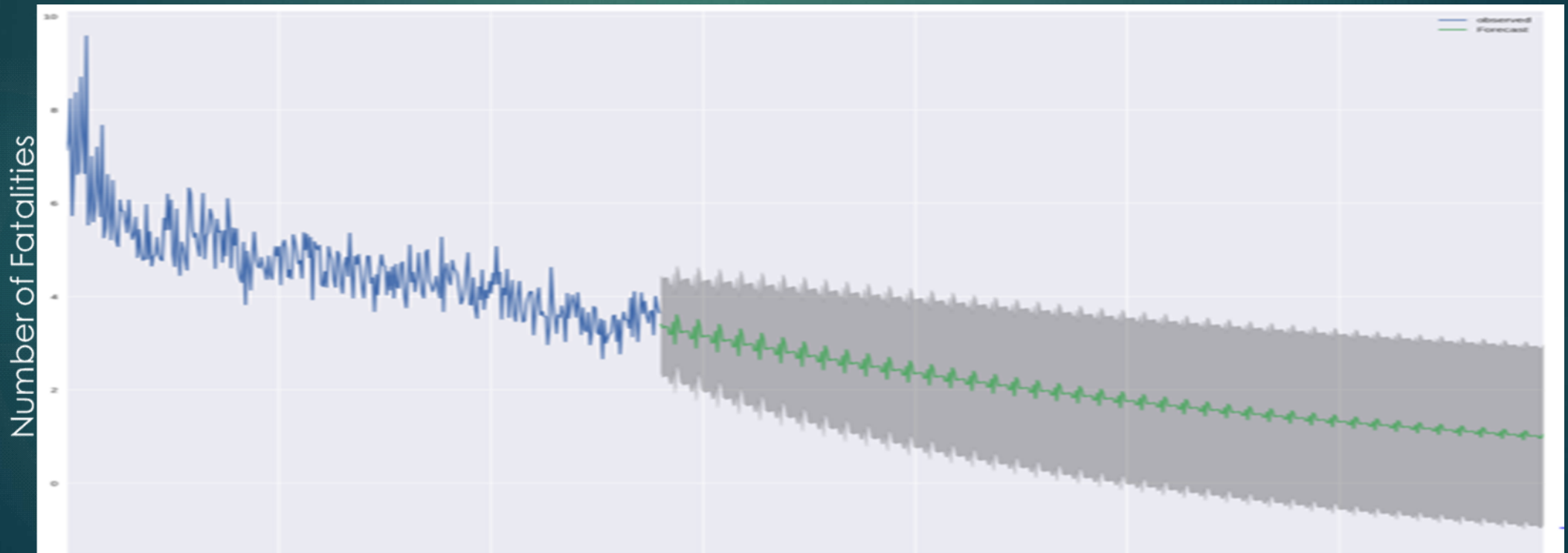
- Check if there are features that are correlated to each other.
- I did some visualization to check the linearity in my dataset.
- Identify my target variable and predictor.
- Standardized the data
- Run the model



# Methodology cont.

## Time Series Forecasting

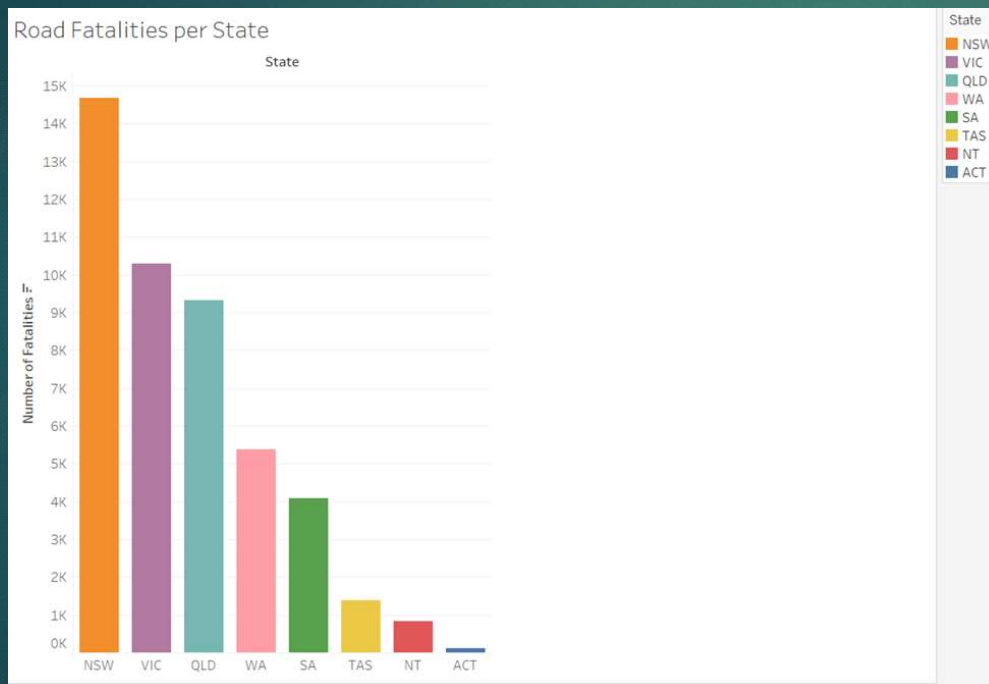
Use the ARIMA forecasting with Grid Search to get optimal value for prediction





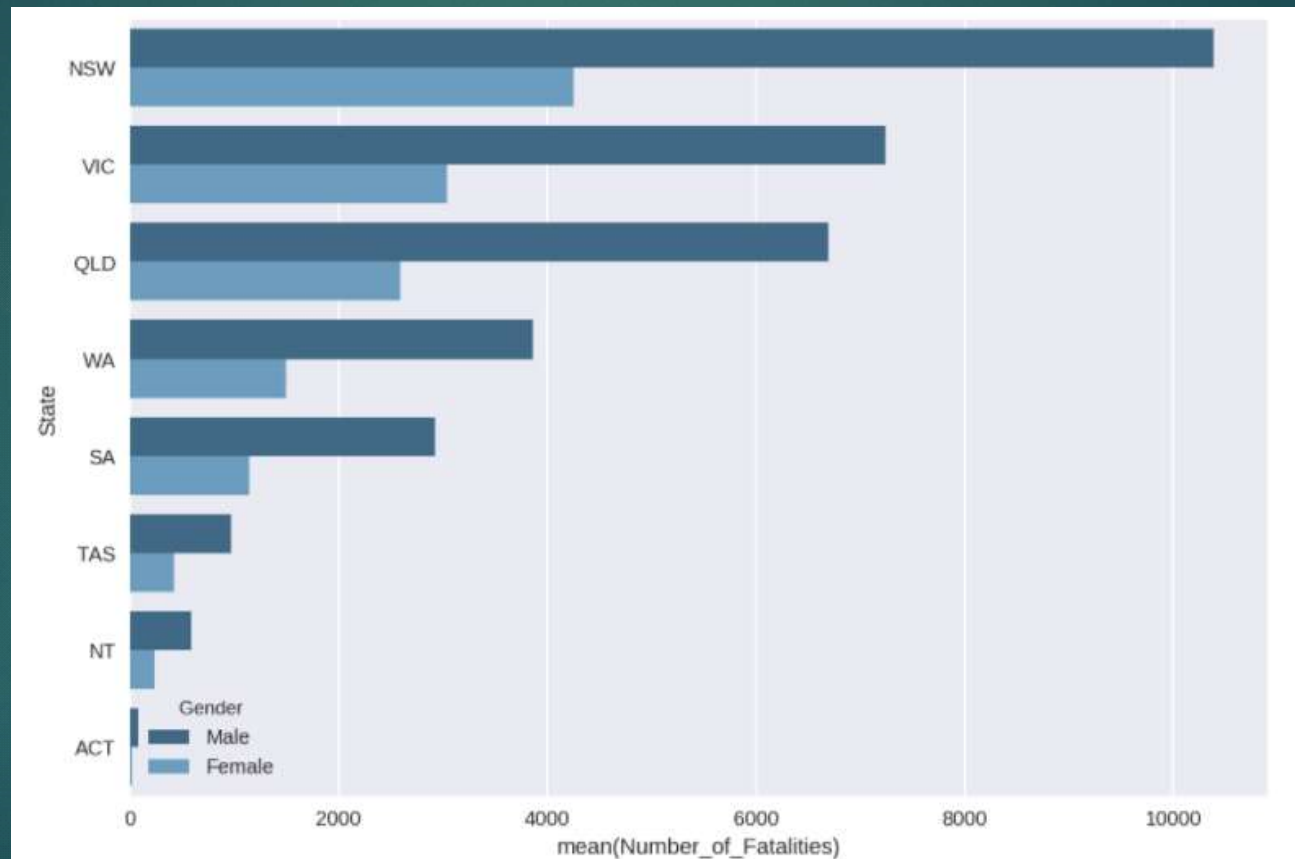
# Conclusion and Findings

- Time series model gave much better result, but time series is applicable only for certain time frame, the model need to maintain regularly.

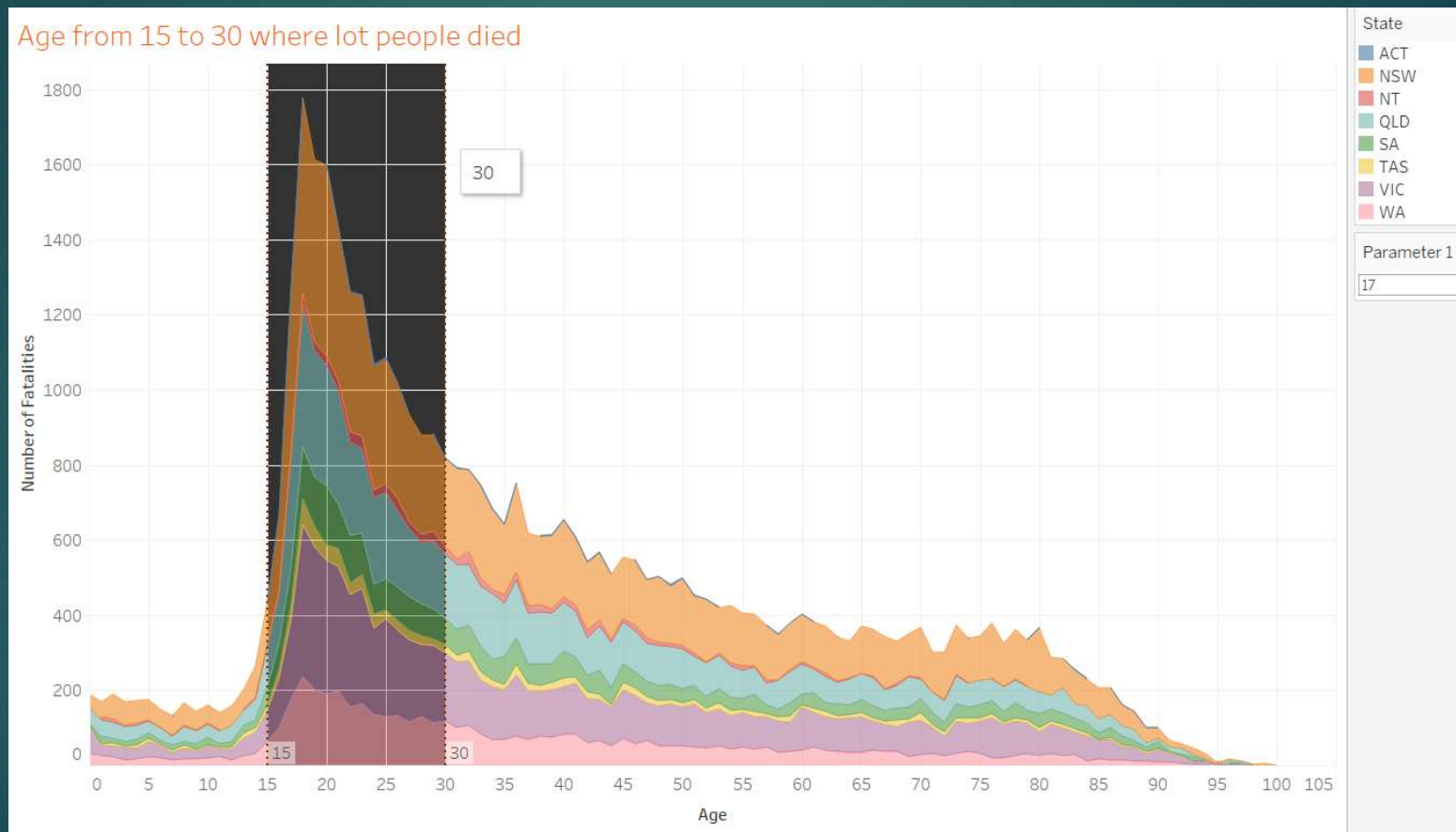


NSW has the highest number of road fatalities

# More men died in all State



# More people die at age from 15 to 30 in road crashes



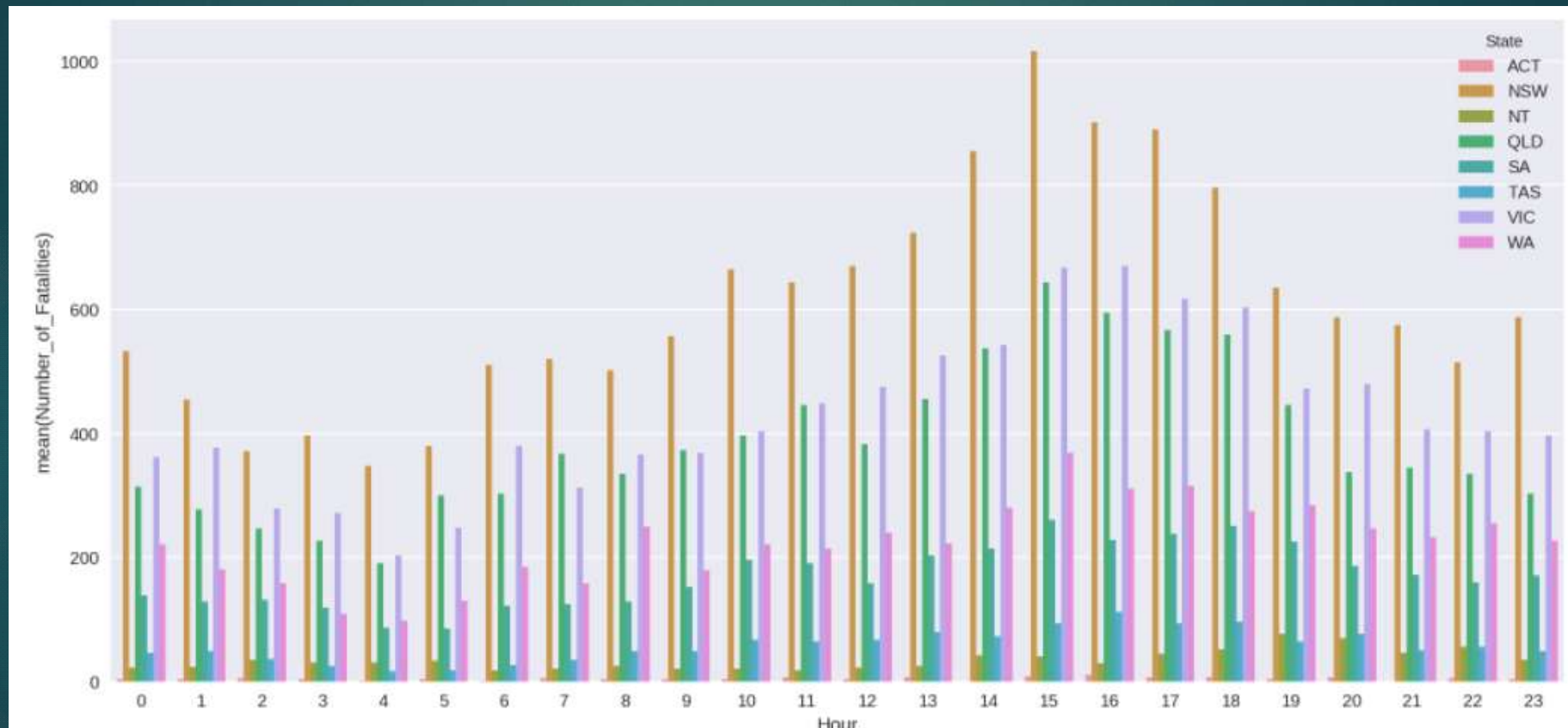


# Bus is safe means of transportation

## Less accident involvement on Bus



## More road accidents between 2:00pm and 6:00 pm



# Recommendations

- Government and people working with them should continue to work in creating policies and initiatives to reduce the number of road fatalities.
- Wide information campaign to tell bus, train or tram are safe means of transportation.
- Add more jobs and business offices in different location or telecommuting might be an option.



Q&A: