



hw6a design discussion

Team Laura and Sunny

Design

Domain: Machine Learning for Predicting Time Series Data

Possible Data Plugins: Stock prices, global temperatures, gas prices, flu cases

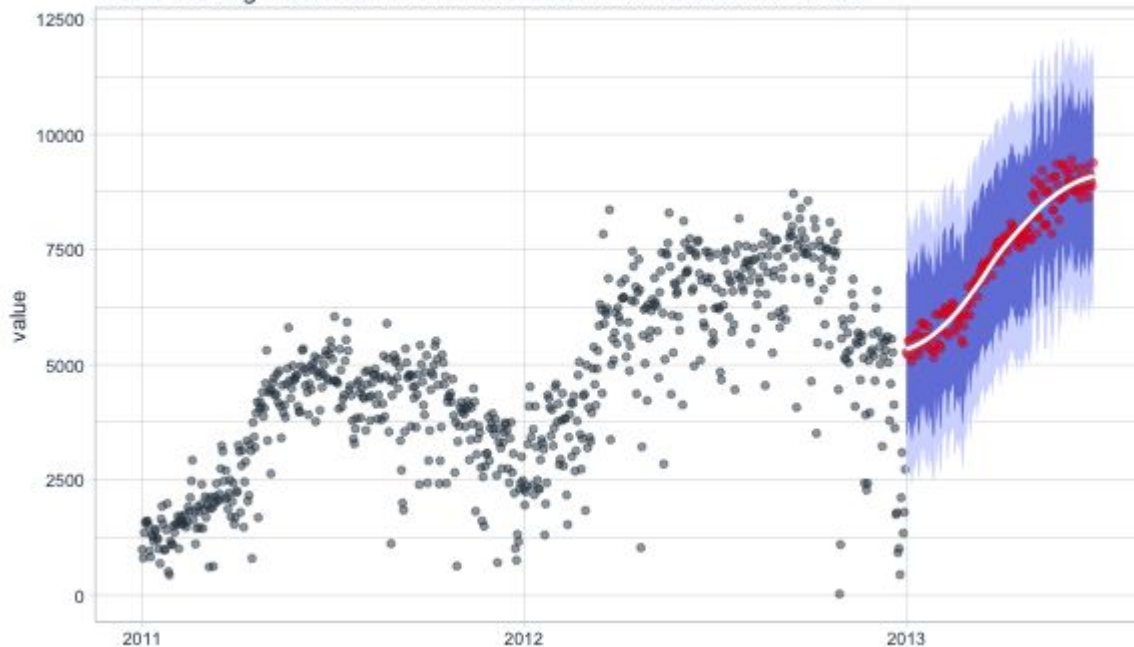
Generality vs Specificity:

- Data plugin provides dataset with time data
- Framework processes dataset with machine learning and return time series forecast
- Visualization creates graphs

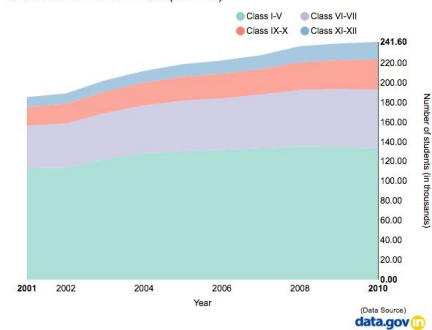
The framework is reusable for all kinds of time series data and provides a lot of flexibility for different data/visualizations.

Potential Visualizations of Time Series Data

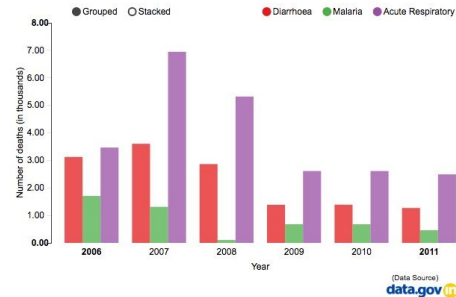
Bikes Sharing Dataset: 6-Month Forecast with Prediction Intervals



Student enrollments in India (2001-10)



Number of deaths by type of diseases in India (2006-2011)



Data Plugin Interface

```
public interface DataPlugin {  
  
    void cleanData();  
  
    String[] getColumns();  
  
    // return path to csv file  
    String getData();  
  
    // return columns to train model on  
    String[] getFeatures();  
  
    // return columns to predict  
    String[] getFactors();  
}
```