Due date:
Final Report Due: December 11 @11 pm.

Data description
The Zillow dataset (modified) recorded Jan 2004- Dec 2015 monthly median sold price for housing in California, Jan 2004-Aug 2017 monthly median mortgage rate, Jan 2004-Aug 2017 monthly unemployment rate, and Jan 2010- Aug 2017 median monthly rental price.

I expect you to use this data whatever way you see fit, to construct a time series analysis and model for forecasting the monthly median sold price for 2016-2017.

This process might include but not limited to summary descriptions, plots, model estimation, model validation, and forecasting.

Report description:
The final report will be a written report that clearly communicates the information below, in a manner suitable for the general audience who might or might not have taken a time series class.

- A description of the problem (i.e. description of the data, what are you forecasting, what questions you would like to explore, etc.)
- A description of the methods you have chosen for this project. A textual and/or visual justification of why you chose these methods are required (i.e. what type of model did you choose, why and how did you choose it).
- A textual and/or visual report on your foundings.
- A graphical and tabular forecasting results.
- A table indicating the rough proportion of work completed by each member, and a list of detailed work, the list can be overlapping: i.e. (just an example!)

Group members	Shan	David	Steve	Nick
Proportion of work	25%	25%	25%	25%
List of work	Initial check od the data (summary tables and graphs) Discussion of problems and chosen	Discussion of problems and chosen methods Data cleaning Modeling Modeling	Discussion of problems and chosen methods Discussion of modeling result Model	Discussion of problems and chosen methods Discussion of model selection results

	methods Forecasting and analyzing the forecasting results Final discussion Write the report	 Discussion of modeling result Final discussion Write the report	selection and verification Discussion of model selection results Final discussion Write the report	 Forecasting and analyzing the forecasting results Final discussion Write the report

In addition to the report, you must submit a Jupyter notebook containing all your codes, and a prediction.csv file containing all your predictions in a single column.

Each member will submit all three files. The files should be identical among the group members.

Grading rubric:

The project is graded based on a total of 20 points. 16 points are based on the identical report, 4 points are based on the member contribution calculated by 4*(proportion of the member)/(max proportion from the group). For example,

Member contribution	Contribution grade	Group report grade	Project grade
Shan: 15% David: 20% Steve: 30% Nick: 35%	4*(15/35)=1.7 2.7 3.4 4	15 15 15 15	16.7 17.7 18.4 19