**MSCA 31006/2 – Time Series Analysis and Forecasting**

**Final Project Proposal**

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**Purpose:** To create predictive time series models (Regression, ARIMA, Exponential Smoothing, and more based on class progress) to predict weekly change in the median value of houses sold in Metro Chicago and its suburbs.

**Data:** **Zillow Housing Data:** [**https://www.zillow.com/research/data/**](https://www.zillow.com/research/data/)

* Median Sale Price (Raw, All Homes, Weekly View): ~ 120 locations, Time Series: 10/7/17 – 10/3/20
* Zillow provides access to high-quality data (clean and complete).

Chart, histogram

Description automatically generated

**Analysis:**

* We will evaluate each of the models to determine the best model, and we’ll provide an analysis of the best fitting model.
* For instance, comparison of median sale prices in Chicago downtown and suburbs (using zip code as a unit). We will provide analysis on the different predictions, trends and other interesting features of the models between various locations.