

Final Capstone Proposal  
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In my final capstone project, I would like to build a dashboard that can be used to forecast if the price of staple foods will go up or down in the near future.

This sort of tool could be very useful for a chef preparing a monthly or seasonal menu for a small to medium sized institutional kitchen that operates on a limited budget. For my purposes, a small to medium sized kitchen is one that is operating on a monthly budget of \$10-30,000 and serves between 50-200 people per day. These budget constraints mean that small changes in prices of food can be extremely detrimental. Being able to check if the price of your preferred feature ingredient can help save time, and face, and spare the chef from creating a menu centering around food stuffs they cannot purchase.

I will be utilizing the Food and Agriculture Organization of the United Nations Food Price Indices, which are freely available on their website in both CSV and Excel format.

(<http://www.fao.org/worldfoodsituation/foodpricesindex/en/>)

I will be using supervised learning tools to assist me in finding the most important features in this dataset and time series analysis to make my forecasting. I plan on utilizing a Random Forest model to assist me with finding the best features, and ARIMA modeling for my forecasting.

I am confident this project will go smoothly, however I will be learning new tools to create the dashboard and anticipate that to be the most challenging part of this project. I will be using Plotly and Dash to create the finished product.