



# Nowcasting Macroeconomic Indicators using Google Trends



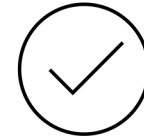
Presented By:  
Aishwarya Sharma  
Harpreet Kaur  
Jagdeep Brar

# BACKGROUND:

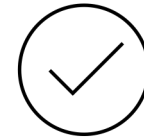
- ❖ Main aim is to nowcast macroeconomic factors ( GDP, Retail Trade Sales and E- Commerce) using Google Trends Data
- ❖ Using Pytrends package of python for fetching Google trends data
- ❖ Need to present dashboard, report and presentation at the end.

# OVERALL PROGRESS

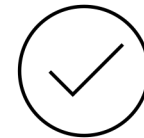
❖ Data Cleaning and Wrangling



❖ Time series for all the three factors made stationary



❖ Econometric Model fitting (DFM, ARMA Model)



# PREVIOUS WEEK PROGRESS

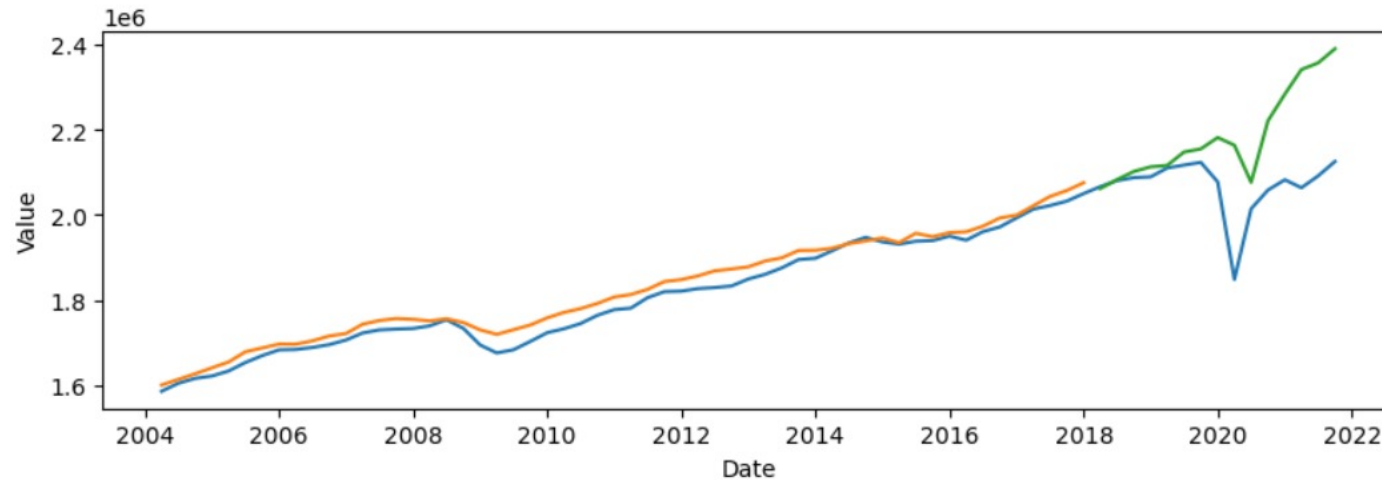
❖ Scheduled Task for Last week : Making Data stationary and fitting econometric models

❖ Work Progress:

- Time Series for all three factors are made stationary
- Did rolling predictions to the time series data
- Split data into training and testing sets
- Fitted DFM models and ARMA model
- Added Diagnostic plots to check accuracy

# RESULTS

- ❖ Did predictions using testing and training data sets
- ❖ Predictions are overfitted and will have to improve it further



# ROADBLOCKS:

- ❖ Calling Google Trends API multiple times blocks
- ❖ Solution as discussed with Partners : To use only single sample rather than working with multiple

# NEXT WEEK PLAN

- ❖ Implement machine Learning Models
- ❖ Comparative study/ analysis for all the applied models
- ❖ Finalize accurate predictions with appropriate chosen model

# ARE WE ON TRACK?

## MEETING WITH THE PARTNERS:

- ❖ On Track as mentioned in the proposal document
- ❖ Scheduled weekly meetings on Thursday
- ❖ Partners are satisfied with what we have done so far
- ❖ Clear all the doubts as soon as we ask them over MS teams/ mails



# INDIVIDUAL AND TEAM EFFORTS

- ❖ Work assigned equally
- ❖ Three macroeconomic factors divided among three contributors
  - Aishwarya Sharma —————➤ Retail Trade Sales
  - Harpreet Kaur —————➤ E- Commerce
  - Jagdeep Brar —————➤ GDP

All three factors have different data sets, keywords (Queries and Topics), categories and need different efforts but with similar goal.

Timings for work: Monday to Friday, 9:30 AM – 5:30 PM

# BRIEF EXPLANATION VIA CODE

- ❖ Brief Overview about the code we are doing is explained using jupyter notebook



Link for image: <https://technology.anis.nl/data-analytics/quickest-way-to-try-out-jupyter-notebook-zero-install-3-cli-commands-and-5-minutes-to-action/>