Project Idea 1: Forecasting Engine

- **Aim**: Building a forecasting engine that allows users to upload a file (excel/ csv) with data and evaluate multiple forecasting techniques on it

- The engine will be modular:

  - Part one allows visualization of time series by breaking it into seasonal, trend and random components, ACF and PACF graphs etc

  - Also if multiple time series are added then correlation and causality graphs could be evaluated

  - Part two will be where user can select different algorithms and evaluate performance on the selected timeseries

  - Part three will be where user can export output graphs and values in the desired format

Project Idea 2: Using Amazon product reviews to identify key topics for product categories

- **Aim**: **Phase 1**

    Select a product category for Amazon and use LDA to identify multiple topics in the reviews

    Phase 2

    Use Doc2Vec on the product level aggregate reviews and build a recommendation engine strictly on reviews

- Output: User will select a product within a category and based on the reviews the user will be shown key topics about the product. For example: Upon selecting a book title the user will be shown
    a. Poor binding or page quality
    b. Brisk Read
    c. Value for money

    Phase 2 output will be recommendation to user based on the reviews using Doc2Vec as basis of similarity or disimilarity

Project Idea 3: Soccer match prediction model

- **Aim**: Predicting probability of win loss or draw in a match of soccer. Variable considered will be player attribute, team formation, recent past performance, home or away game and fatigue

- Output: Probability spread of win/ loss or draw for a team based on the variables and events like player injury/ cards or suspentions