XYZ, Inc., is an American multinational manufacturer and marketer of branded processed consumer foods sold through retail stores. Today, the company markets many well-known North American brands, including Golden Grain Flour, Lily's Naturals (a brand known for organic snacks), NutraBar (a range of energy bars), and Mountain Grove Farms (offering a variety of organic produce). For baking, there's Bessie Baker and Parker's Bakery, which provide a selection of mixes and doughs. In the yogurt aisle, you can find products from Yogurt Plus, while granola bars are often made by Nature's Pathway. Frozen pizzas are available from Tasty Treats, and you can grab frozen dough products from Parker's Bakery. When it comes to Mexican-inspired meals, Sunny Mesa Foods has you covered with everything from taco kits to enchiladas. For indulgent desserts, there's Frost & Fancy for premium ice creams. Popular breakfast cereals like Golden Oats, Champion Crunch, Crisp Squares, and Fortune Flakes line the shelves, along with other kid-favorite options like Fruit Fun Bites, Chocolate Puffs, and Count Cacao, along with a variety of Spooky Cereals that make for a fun Halloween treat.

Description of the project:

As part of the Demand Planning and Statistical Forecasting function, we currently generate three-year demand forecasts based on historical data spanning three to four years. Given the extensive product portfolio within our network, manual review of all forecasts is impractical. We seek an innovative solution, such as a logic or rule-based algorithm, to categorize the given data and identify potential discrepancies between forecasts and historical (level, trend, and seasonality). By highlighting these inconsistencies, we can streamline exception management and refine forecasts accordingly. This will ultimately ensure that the most accurate forecasts are provided to Supply Teams, thereby facilitating efficient and effective demand planning.

Problem Statement:

1) To Develop an algorithm/logic to classify the given product data & identify cases where the forward forecast deviates significantly from the history.
2) To develop a framework on how to prioritize the exceptions arising from the above cases of higher deviation in forecast.

Key Areas of the project: Demand Planning, Demand Forecasting, Statistical Forecasting, Supply Chain Management, R Studio, Python, Advanced Excel, Power BI, Tableau.