Project Flow for Inventory Management (Demand planning & Inventory optimization)

I was working for a client in Oil & Gas sector, where the challenge was to provide data for deriving insights for parts demand planning and inventory optimization.

The source of the data was majorly from databases like SQL SERVER ,Flat csv files from the stores and ERP systems generated data which was available on local .My task was to migrate the historical data to cloud so that I can derive insights of trends and patterns from the data and support the Supply chain team in planning their parts for production to avoid any stock outs .

Since the raw data is not clean, I performed data cleansing techniques using pyspark, data bricks and then push the final data to ADLS gen 2 (destination system) which helps the Data analyst & Data Scientists to derive their findings .

I used Azure Medallion architecture consisting of Bronze, Silver & Gold layers. In each layer I used to perform different tasks.

In Bronze layer we read the datasets, schema validation etc

In Silver layer we do the necessary transformations like null value treatment, adding new columns.

In Gold layer we do the aggregations to generate the data.