# NEOSTATS

SALES FORECASTING SOLUTION FOR RETAIL AND CONSUMER GOODS

- Managing sales across Stores and Categories is complex without accurate forecasts, leading to inefficiencies in inventory and planning.
- A machine learning-based sales forecasting model generates granular predictions for cities, products, and categories, enabling data-driven decisions for optimized inventory and resource allocation.

### CORE CAPABLITIES AND FUNCTIONALITIES:

#### 1. Accurate Sales Forecasting:

- Generates precise, data-driven sales forecasts based on historical trends.
- Handles seasonality, trends, and holidays for accurate demand prediction.

#### 2. Granular Insights:

- Provides detailed forecasts for combinations of stores, product categories, and locations.
- Enables fine-tuned analysis for specific business segments.

#### 3.Interactive Dashboard and Web Application:

- Intuitive dashboards with filtering options for stores, categories, and dates.
- Real-time visualizations, including line charts and pie charts, to aid decision-making.

#### 4. Efficient Data Processing:

- Aggregates and preprocesses large datasets into actionable formats.
- Parallel processing reduces computation time, allowing quicker model training and updates.

#### 5. Seamless Integration:

- Supports integration with existing sales databases and real-time data ingestion platforms.
- Outputs forecasts in reusable formats (.csv files) for broader business applications.

#### 6. Actionable Insights:

- Offers insights into inventory optimization, resource allocation, and sales strategy.
- Highlights demand patterns and growth opportunities for better planning.

#### 7. Scalable Solution:

Easily adapts to changing data scales and multiple business units or regions.

#### TARGET USERS:

- 1. Retail and Consumer Goods Businesses:
- Stores, supermarkets, and e-commerce platforms aiming to optimize inventory and plan sales.
- 2. Sales Managers and Planners:
- Professionals responsible for forecasting sales, resource allocation, and achieving revenue goals.
- 3. Supply Chain and Inventory Teams:
- Teams focused on managing stock levels, avoiding shortages, and minimizing overstocking.
- 4. Business Analysts:
- Analysts looking for actionable data insights to refine sales strategies and operational planning.
- 5. Corporate Decision-Makers:
- Executives and stakeholders seeking strategic, data-backed decisions to improve profitability.
- 6. Finance and Operations Teams:
- Departments managing budgets, operational efficiencies, and revenue projections.

## WORKFLOW

DATA COLLECTION

DATA PREPERATION

MODEL TRAINING

FORECAST
GENERATION

The sales forecasting model leverages machine learning to provide accurate, granular predictions. By integrating these forecasts into an interactive Power BI dashboard and Web Application, businesses can make informed decisions, optimize inventory, and plan resources effectively, ensuring operational efficiency and future scalability.