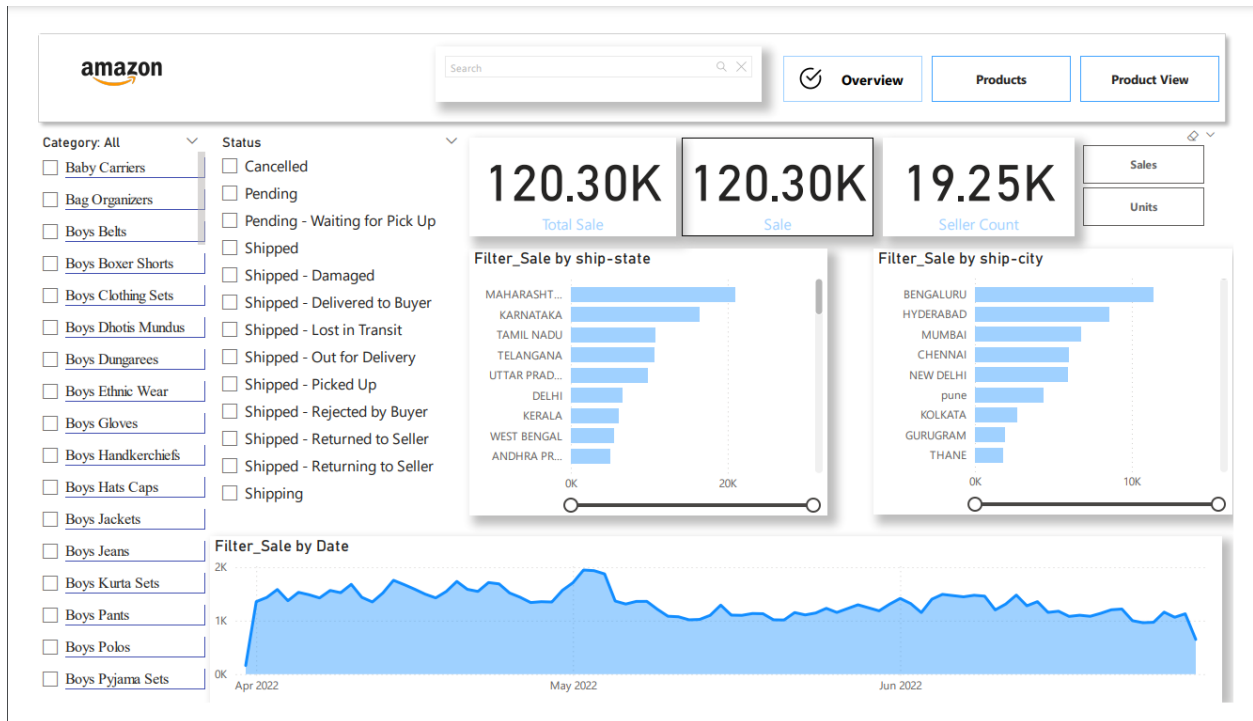


# Amazon Sales Insights Dashboard

## Executive Summary

This comprehensive report details the creation of a Power BI dashboard for analyzing Amazon's fashion sales data, designed to provide strategic insights through detailed data visualization and interactive features. The project illustrates a data-driven approach to business intelligence, maximizing the use of Power BI functionalities.



## Project Objectives

The objectives of this project were:

1. To develop an interactive dashboard that provides a granular view of sales data across different dimensions such as time, geographic location, and product status.
2. To utilize advanced data transformation and visualization techniques to extract meaningful insights from raw data.
3. To ensure data accuracy and integrity for strategic decision-making.

## Tools and Technologies

- **Microsoft Power BI:** Main platform for data importation, transformation, visualization, and dashboard publication.
- **Power Query Editor:** Used extensively for data cleaning and transformation.

- **DAX (Data Analysis Expressions):** Applied to create complex calculations, custom measures, and to enhance data modeling capabilities.

## Implementation Process

### Data Acquisition and Preparation

- **Data Sourcing:** Obtained fashion sales data from Amazon's internal systems in CSV format.
- **Initial Data Loading:** Imported data into Power BI, checking for completeness and correctness.
- **Cleaning and Transformation:**
  - **Power Query Editor:** Used for deduplicating data, handling null values, and correcting formats.
  - **Advanced Text Functions:** Split complex text fields and extracted key information to enhance data usability.

### Dashboard Design and Development

- **Layout and Theme:** Designed a visually appealing layout using a consistent theme that aligns with Amazon's branding guidelines.
- **Interactive Components:**
  - **Slicers:** Implemented various slicers for dynamic filtering by date, geographic details, and product status.
  - **Tool Tips:** Customized tooltips to provide additional context when hovering over data points.
- **Custom Visuals:** Integrated custom visuals from the Power BI marketplace to better represent complex datasets and enhance user experience.

### Advanced Data Modeling and DAX Formulas

- **Calculated Columns:** Created calculated columns to derive new metrics such as average sales per unit, sales variance month-on-month, and other key performance indicators.
- **Measures:** Developed measures to perform on-the-fly calculations during data exploration, such as total sales, count of transactions, and average discount per product.
- **Time Intelligence:** Used DAX to compare performance across different time periods, analyzing trends and identifying seasonal patterns.

### Visualization Techniques

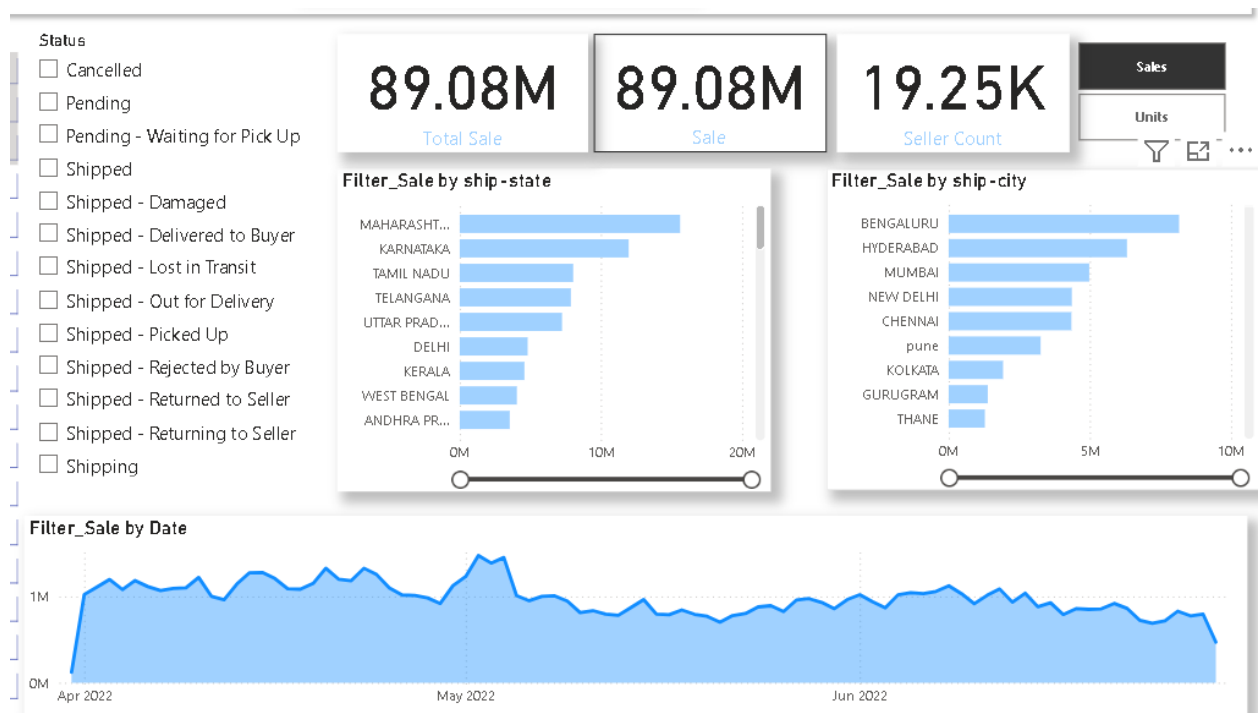
- **Chart Selection:** Employed a mix of bar charts, and line graphs to depict various aspects of the data. For example, bar charts for sales by region, line graphs for sales trends over time.
- **Conditional Formatting:** Applied conditional formatting to highlight significant trends and outliers in the data.

- **Drill-Through Features:** Set up drill-through capabilities allowing users to click on a specific element in a visual and drill into more detailed data related to that element.

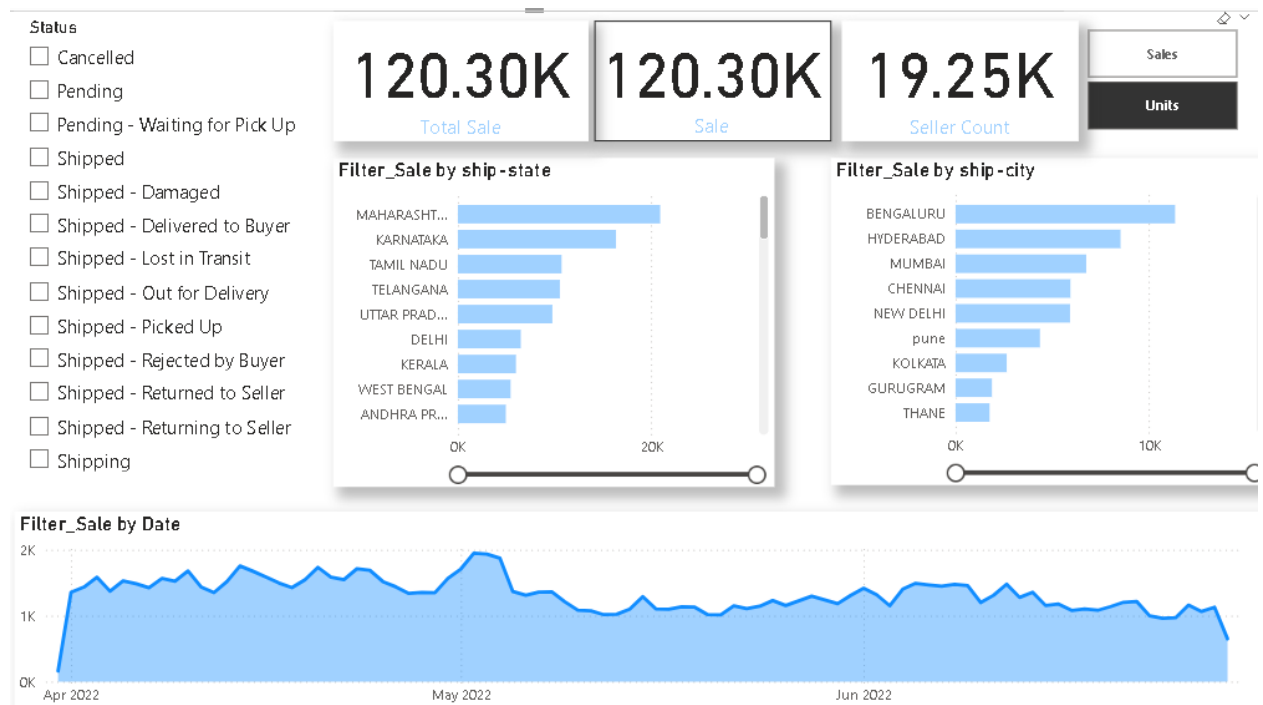
## Insights and Findings

### Sales and Units Overview

- **Total Sales:** Recorded at 89.08 million, indicating robust activity within the fashion segment during the observed period.



- **Seller Count:** Remained stable at 19.25K, showing consistent market participation by sellers.
- **Units Sold:** A total of 120.30K units were sold, highlighting effective inventory turnover and consumer demand fulfillment.



### Geographic Distribution and Trends

- **Top Performing City:** Bengaluru emerged as the top city with the highest sales numbers and units sold, underscoring its commercial significance.
- **Leading State:** Maharashtra led in both sales and units sold, possibly due to its large consumer base and strong logistics infrastructure.
- **Temporal Sales Peak:** Both sales and units sold reached their peak in May 2022, likely driven by seasonal purchasing patterns or promotional activities.

### Shipping and Logistics Observations

- **Efficient Delivery:** Categories such as 'Shipped - Delivered to Buyer' were particularly noteworthy, suggesting proficient delivery operations.
- **Logistics Challenges:** Noted issues in 'Shipped - Damaged' and 'Shipped - Returned', pinpointing areas for potential improvement in handling and customer service.

### Conclusion

The Amazon Sales Insights Dashboard effectively captures and visualizes critical data, providing actionable insights into sales performance, market trends, and operational efficiencies. This tool demonstrates the powerful application of business intelligence in strategic planning and operational adjustments.