

1. Project Overview

- Dataset used (Mendeley Supply Chain Dataset)
- Objective: *Analyse global supply chain efficiency and delivery performance*
- Tools used: *Python (for cleaning), Tableau (for visualization)*

2. Data Preparation Summary

The raw dataset containing 180,520 records was cleaned using Python (pandas). Nulls and timestamp inconsistencies were resolved, and final data exported.

3. KPIs Included

| KPI | Description |
|---------------------------|---|
| On-Time Delivery % | Percentage of orders shipped within the scheduled time. |
| Late Delivery % | Orders exceeding scheduled time. |
| Avg Shipping Delay (Days) | Mean difference between actual and scheduled shipping time. |
| Avg Late Risk | Average severity of a late-arrival event rather than the risk of it happening at all. |

4. Key Insights (from your dashboard)




- 54.8% of orders are delayed, indicating a need for process optimization.
- Europe and LATAM regions show higher delay frequency.
- Express shipping has the lowest average delay.
- Profit margins are steady across regions but decline when delivery risk increases.

5. Working on:

- **Optimize shipping partners** in regions with chronic delays.
- **Predictive analytics** can be implemented to identify at-risk orders.
- **Customer segmentation** may help tailor shipping modes efficiently.

6. Final Deliverables

Include:

-  Cleaned dataset (supply_chain_clean.csv)
-  Tableau workbook (Supply_Chain_Dashboard.twbx)
-  Insights report / slide deck