



# **Sri Krishna College of Engineering and Technology**

## **Data Analysis With ML Essentials Using PowerBI Supply Chain & Inventory**

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# Problem Statement

A manufacturing company manages inventory across multiple warehouses.

The company faces two major issues:

- Stock-outs causing delayed customer deliveries
- Overstocking leading to high holding costs Currently, inventory decisions are made manually without analytical support.

As a Supply Chain Analyst, you are asked to:

- Monitor stock levels
- Identify low-stock and overstocked products
- Optimize reorder decisions
- Improve inventory turnover

# Inventory Overview (Core Page)



20.06K

Count of Product\_Id

124

Low Stock Products

1.30K

Inventory Turnover

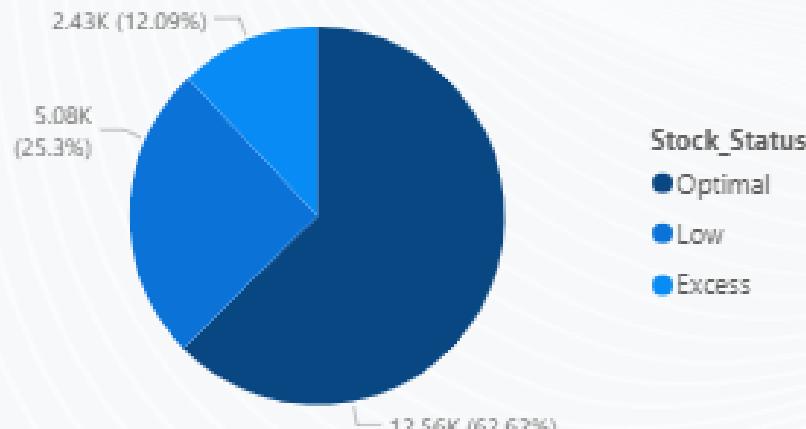
54.00

Average of  
Units\_in\_Stock

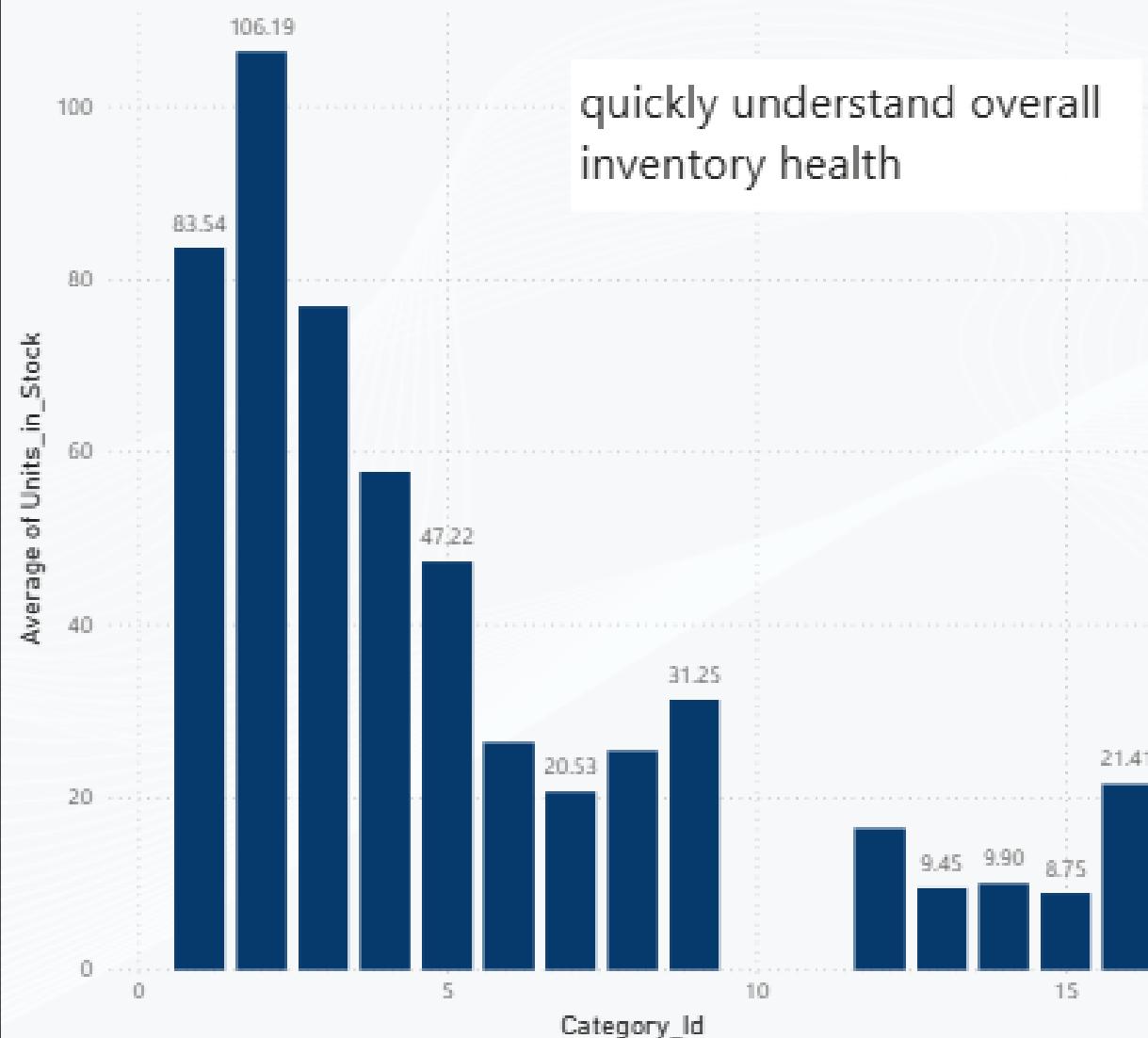
Total Sales Quantity by Store\_Id



Count of Product\_Id by Stock\_Status



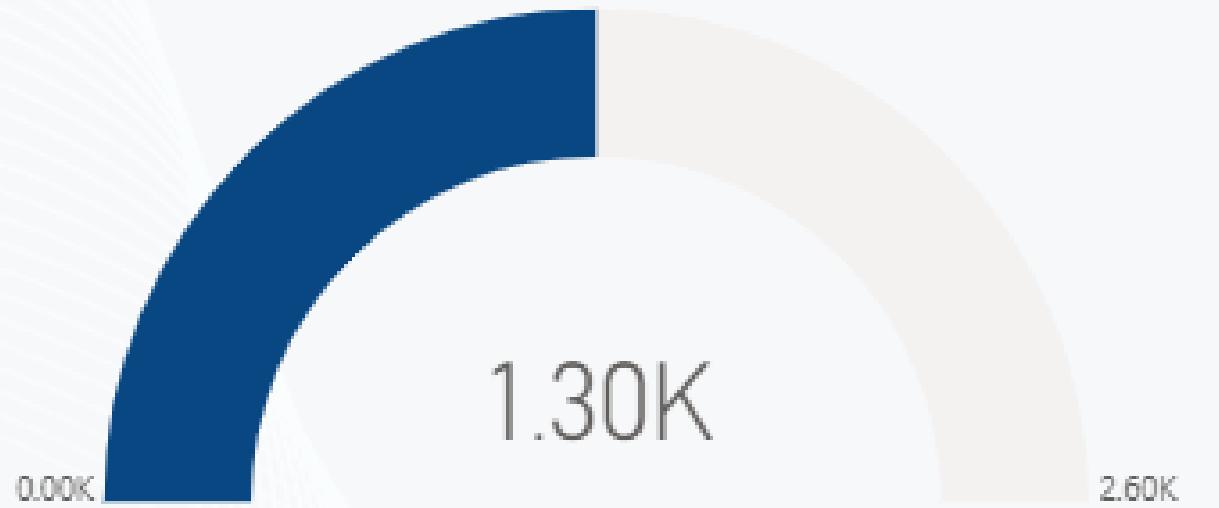
Average of Units\_in\_Stock by Category\_Id



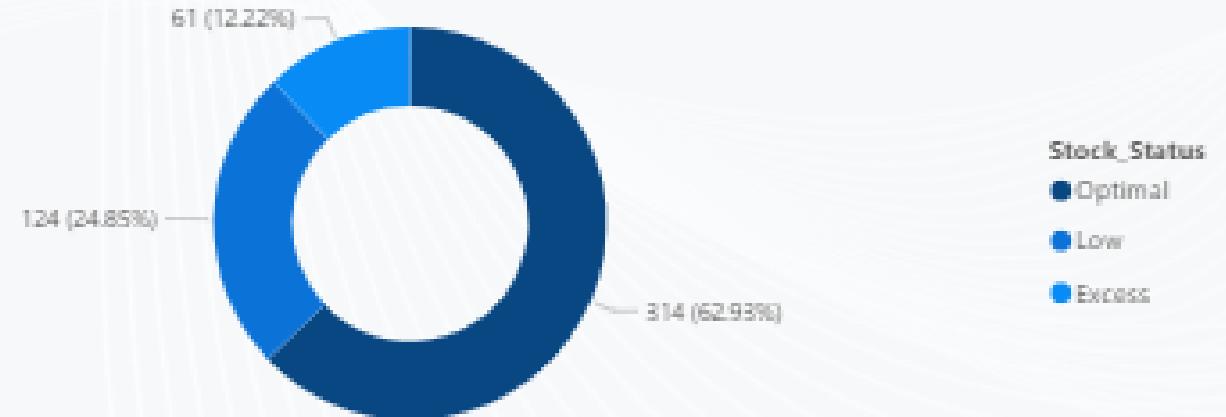
# Product & Stock Analysis



Inventory Turnover



Count of Product\_Id by Stock\_Status



Stock\_Status

- Excess
- Low

Product Name	Sum of Units_in_Stock	Stock Status
Hygienic Towel	140	Excess
Hygro Cotton	75	Optimal
Ice Cream	100	Optimal
Immersion Rod	15	Low
Immunity Boosting	120	Excess
Immuniveda Turmeric	70	Optimal
Induction Cooktop	15	Low
Infant Bodysuit	12	Low
Infant Hoodie	12	Low
Instant Hand	140	Excess
Instant Noodles	190	Excess
Intense Repair	120	Excess
Iodized Salt	150	Excess
Jeera Rice	95	Optimal
Joya Fresherware	30	Optimal
Joya Kitchen	50	Optimal
Joya Storage	20	Optimal
Kachi Ghani	90	Optimal
Kesar Pista	40	Optimal
Kids Barbie	140	Excess
Kitchen King	170	Excess
KitKat (37.3g)	75	Optimal
Total	26459	Excess

# Root Cause & Insights

1

4

## **Key influencers    Top segments**

What influences Stock\_Status to be Low

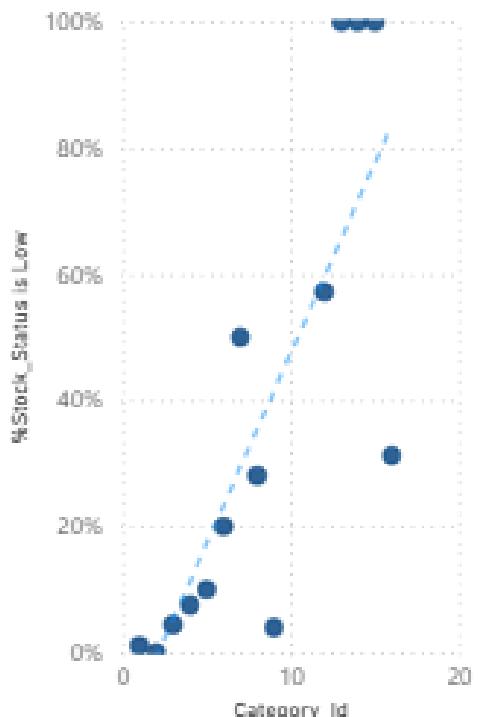
**When...**

...the likelihood of  
Stock Status being Low  
increases by

Category\_Id goes up 4.87

5.54

On average when Category\_Id increases, the likelihood of Stock\_Status being Low increases.



 Category\_Id

 Brand\_name

W

1

**Sum of Units in Stock:**  
26459

# Q&A & Geography



Sign in for enhanced options You'll have access to synonym suggestions that improve Q&A results.

[Sign in](#) Add synonyms on your own

Ask a question about your data

Try one of these to get started

[what is the total sales value by sub category](#)

[what is the total sales quantity by sub category](#)

[show me total sales value for the last year](#)

[Show all suggestions](#)

1. Which products have low stock?  
2. Inventory turnover by category  
3. Top 5 products by unit in stock

Low Stock Products and Total Sales Quantity by State

The map displays the geographical regions of South Asia, including Afghanistan, Pakistan, India, and surrounding countries. Specific areas are highlighted in blue to indicate regions of low stock or high sales volume. Labeled locations include Ashgabat City, Kabul, New Delhi, Kathmandu, Abu Dhabi, Muscat, and Male. Major bodies of water like the Arabian Sea and Bay of Bengal are also visible.

TURKMENISTAN

TAJIKISTAN

GANSU

CHINA

QINGHAI

SICHUAI

IRAN

AFGHANISTAN

PAKISTAN

TIBET

NEPAL

BHUTAN

BANGLADESH

YUNNAN

MYANMAR

LAOS

THAILAND

OMAN

J.A.E

INDIA

NEPAL

Kathmandu

Abu Dhabi

Muscat

Mascat

Arabian Sea

Bay of Bengal

Andaman Sea

Male

Laccadive Sea

SRI LANKA

Naypyidaw

Bangkok

Phnom Penh

MALAYS

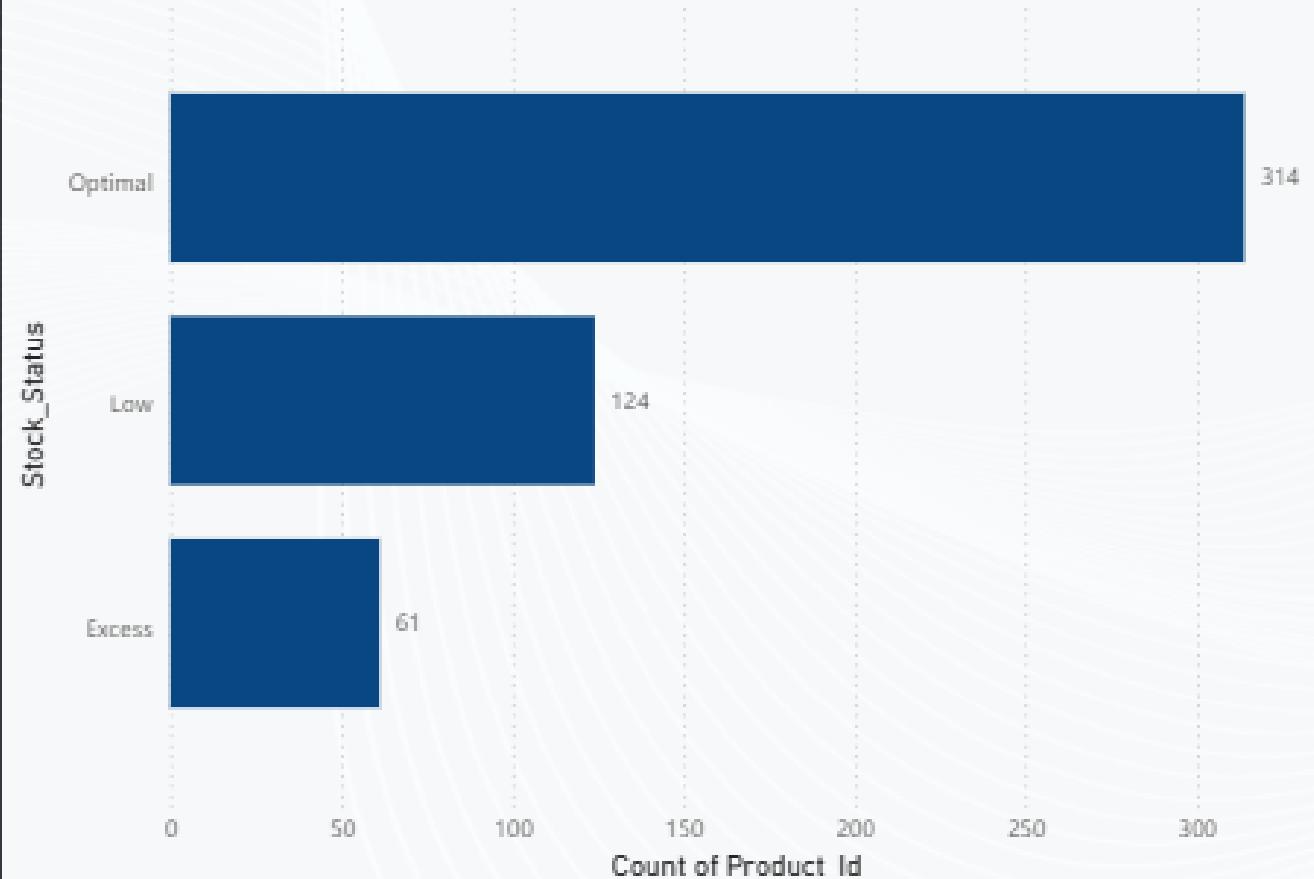
SINGAI

Microsoft Bing

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# Narrative Summary

Count of Product\_Id by Stock\_Status



At 314, Optimal had the highest Count of Product\_Id and was 414.75% higher than Excess, which had the lowest Count of Product\_Id at 61.

Optimal had the highest Count of Product\_Id at 314, followed by Low at 124 and Excess at 61.

Optimal had 314 Count of Product\_Id, Low had 124, and Excess had 61.



# Thank You