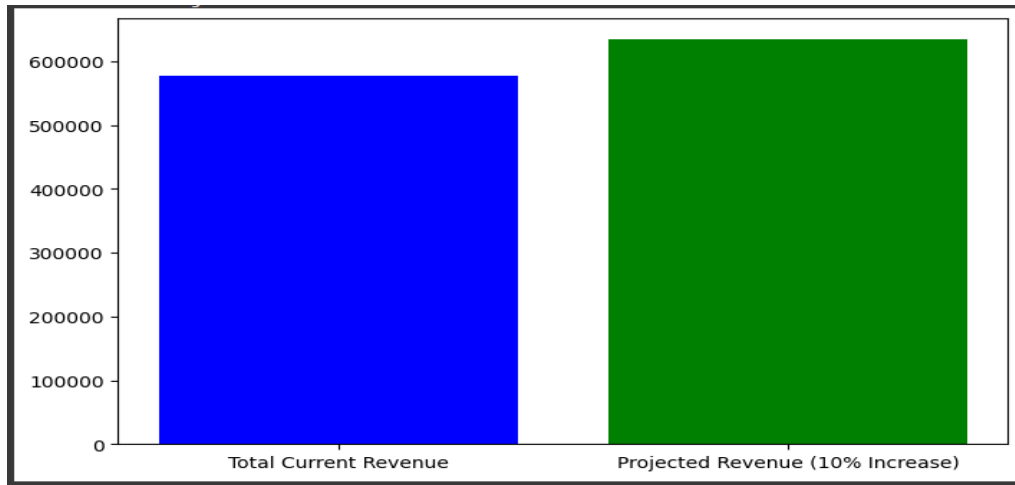
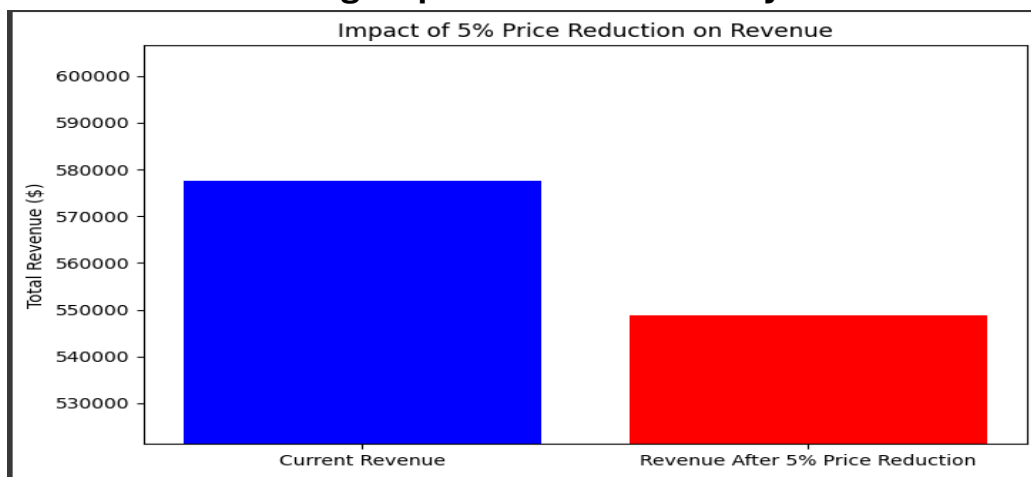


1. What is the expected sales volume if demand increases by 10%?



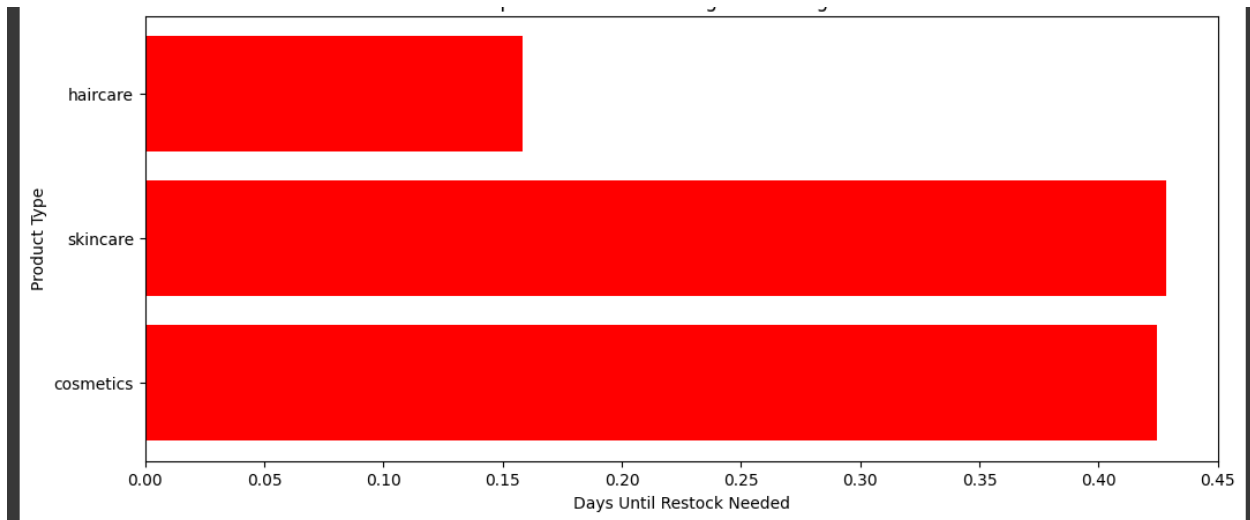
A **10% increase in demand** is projected to boost total revenue from **\$577,604.82** to **\$635,365.30**, reflecting an increase of **\$57,760.48**. This **10% growth** highlights the potential for higher profitability. Businesses should **optimize inventory and supply chain management** to meet the rising demand and maximize revenue.

2. How will revenue change if prices are reduced by 5%?



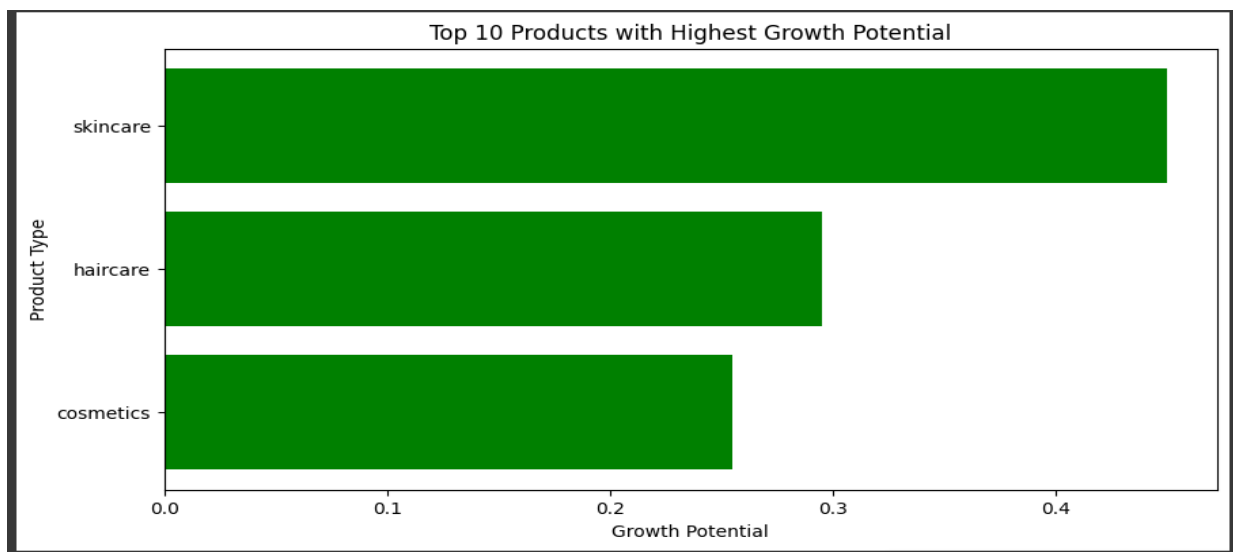
Reducing prices by **5%** would lower total revenue from **\$577,604.82** to **\$548,724.58**, resulting in a **\$28,880.24** loss. This highlights the need to assess whether increased sales volume can compensate for the revenue decline before implementing price reductions.

3. When will each product need to be restocked based on sales?



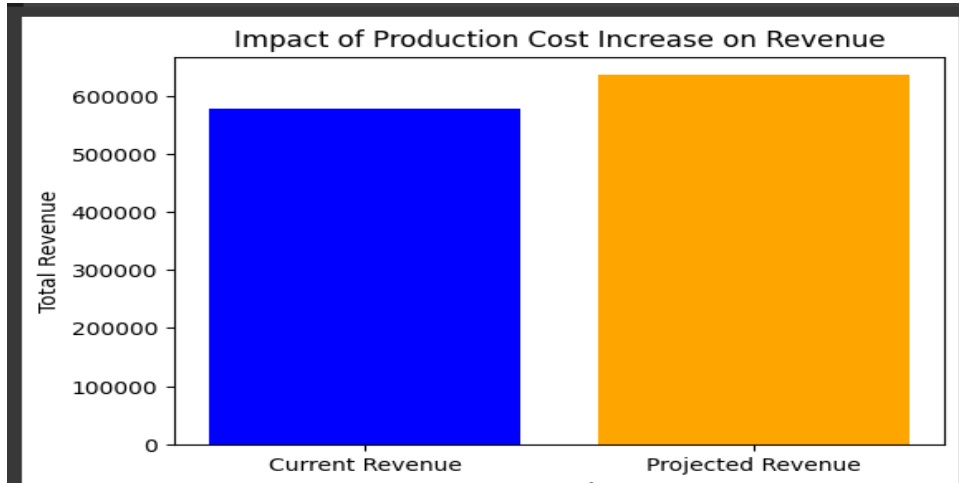
The analysis shows that **cosmetics, skincare, and haircare** products will need restocking soon. **Cosmetics and skincare** have the highest sales rates, requiring replenishment in **~0.42 and ~0.41 days**, respectively. **Haircare** follows with **~0.17 days**. Prioritizing these products will help prevent stock shortages.

4. Which products have the highest opportunity for sales growth based on current patterns?



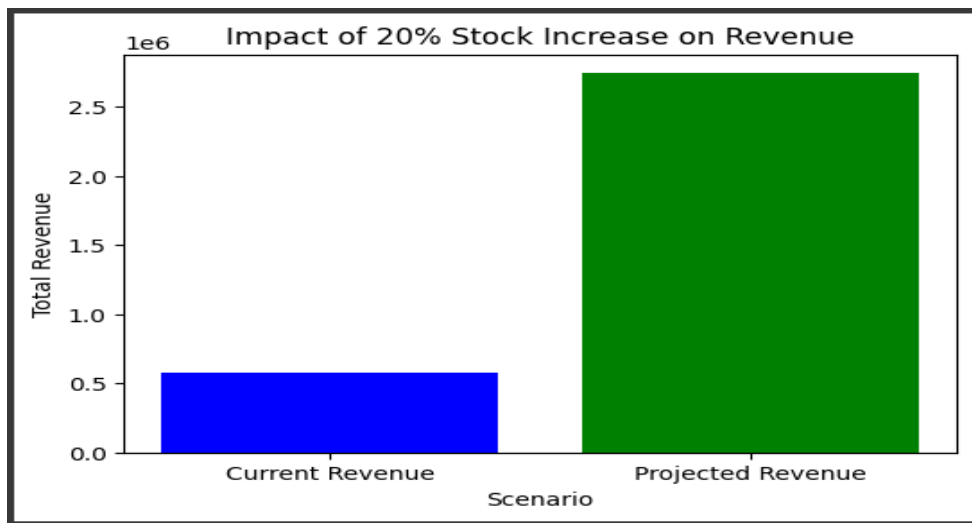
The analysis reveals that **Skincare** products have the highest growth potential, contributing **44.97%** of total sales, followed by **Haircare** at **29.53%** and **Cosmetics** at **25.50%**. This indicates a strong demand for skincare items, making them the best candidates for strategic investment and marketing efforts to maximize future sales.

5. How will increased production costs affect final prices and profits?



Increasing production costs by **10%** led to an adjustment in final prices to maintain profit margins, resulting in a projected revenue increase from **\$577,604.82** to **\$635,365.30**. This suggests that price adjustments can help offset rising costs and boost revenue, but potential impacts on demand should be carefully monitored.

6. What is the impact of a 20% increase in inventory on total revenue?



The current total revenue is **\$577,604.82**. After increasing stock levels by **20%**, the projected revenue is expected to rise significantly to **\$2,742,659.96**.

This suggests that increasing stock availability may lead to a substantial boost in sales, assuming demand follows the supply increase proportionally. However, external factors such as market demand, competition, and storage costs should be considered before implementing such a strategy.