* **Title: Retail Business Insights and Trends**
* **Subtitle: Analysing Shopping Patterns and Customer Behaviour**
* **Presenter: Youhem Rouainia**

**Slide 2: Introduction**

* **Purpose: Overview of the retail business trends and customer shopping behaviour.**
* **Objective: To provide insights into customer preferences, seasonal trends, and purchasing patterns.**

**Slide 3: Customer Segmentation and Category Preferences**

* **Visual: Bar chart showing moving average of count of category by gender.**
* **Insights:**
  + **Discuss the preferences of male and female customers across different categories like clothing, footwear, accessories, and outerwear.**
  + **Highlight which categories are more popular among each gender.**

**Slide 4: Previous Purchase Analysis**

* **Visual: Bar chart showing count of previous purchases by category.**
* **Insights:**
  + **Analyse the frequency of purchases in each category.**
  + **Identify which categories have the highest repeat purchase rates.**

**Slide 5: Category Trends and Review Ratings**

* **Visual: Line graph showing trends across categories and scatter plot for item purchased by payment method.**
* **Insights:**
  + **Discuss the overall trends in different categories.**
  + **Explore how review ratings and previous purchases influence shopping trends.**
  + **Analyse payment methods and their correlation with item types and gender.**

**Slide 6: Seasonal Shopping Trends**

* **Visual: Stacked bar chart showing count of items purchased by season.**
* **Insights:**
  + **Discuss how shopping behaviour changes across different seasons (Fall, Spring, Summer, Winter).**
  + **Highlight peak shopping times and popular items in each season.**

**Slide 7: Geographical Shopping Trends**

* **Visual: Heatmap showing shopping trends by location.**
* **Insights:**
  + **Analyse how shopping trends vary by geographical location.**
  + **Identify regions with high and low shopping activity.**

**Slide 8: Product Category Shopping Trends by Gender**

* **Visual: Bar chart showing count of purchase amount by gender and item purchased.**
* **Insights:**
  + **Compare the purchasing behaviour of male and female customers across various product categories.**
  + **Highlight the most and least popular items purchased by each gender.**

**Slide 9: Conclusion**

* **Summary: Recap of key insights and trends observed in the data.**
* **Recommendations: Suggestions for targeted marketing strategies, inventory management, and customer engagement based on the insights.**
* Conclusion
* This Python script provides a comprehensive overview of traffic accident data through systematic preprocessing and insightful visualizations. It lays the groundwork for deeper analysis and actionable recommendations to improve road safety.
* Final Deliverable: The code successfully combines data cleaning, exploratory analysis, and visualization to uncover meaningful patterns in traffic accident data.