

Turtle Games

Analysis on customer behaviour and
trends to accelerate Turtle Games sales





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Business Case:

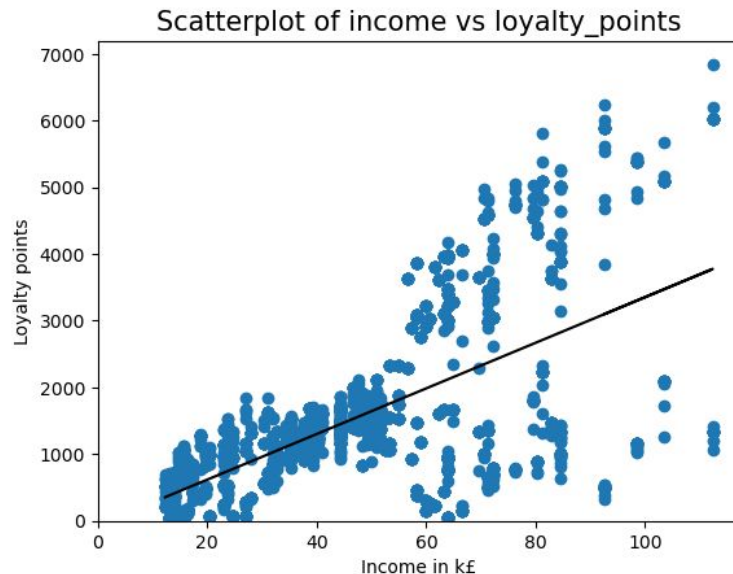
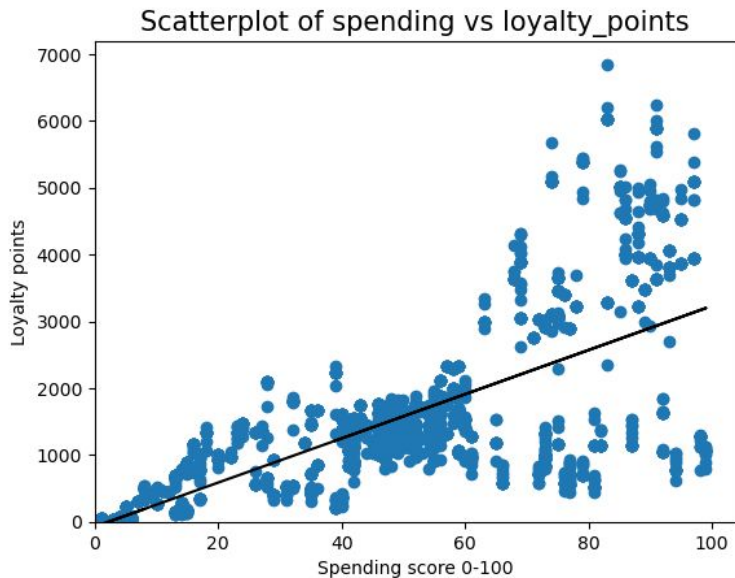
Turtle Games seeks deeper insights into loyalty program performance and demographic-specific segments for targeted marketing. This involves analysing past campaigns and utilising social data for future insights. To drive overall sales growth, understanding sales dynamics across regions is vital for informed investment decisions.

Five questions have been identified to guide the structure of the comprehensive data analysis.

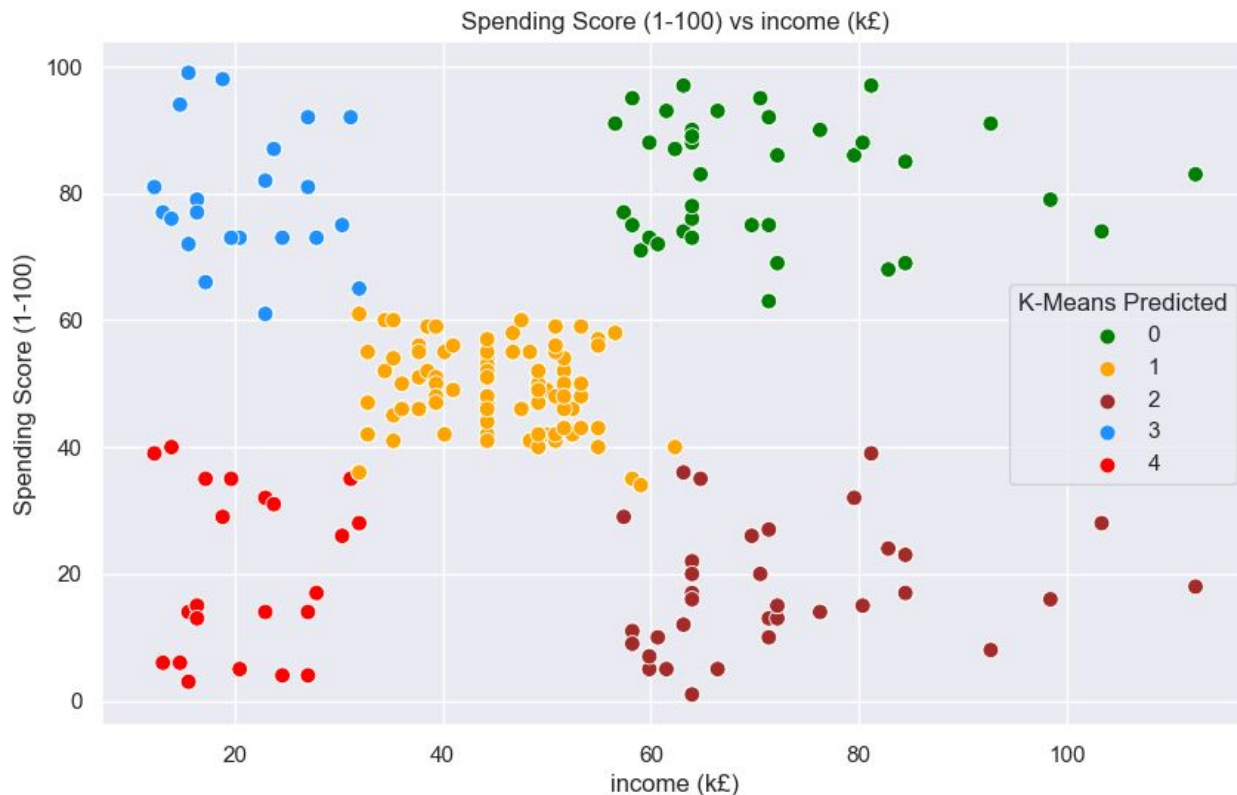
1. How do customers accumulate loyalty points?
2. How groups within the customer base can be used to target specific market segments?
3. How social data (e.g. customer reviews) can be used to inform marketing campaigns?
4. The impact that each product has on sales?
5. How reliable the data is (e.g. normal distribution, skewness, or kurtosis)?
6. What the relationship(s) is/are (if any) between North American, European, and global sales?

Income, spend and age of customers are highly correlated with their loyalty points explaining almost 83% of the variance in loyalty points.

Using this model, a one-point change in spend, income, or age can drive 34, 33, and 11 loyalty point changes. For instance, a user with a spending score of 60, income of 50, and age of 20 is likely to generate 1754 loyalty points



Turtle games has 5 customer groups split into Luxury Enthusiasts, Balanced Shoppers, Savvy Savers, Spending Optimists, Budget Essentials with their own spending habits and respective income.



Segment 0: "Luxury Enthusiasts"

Annual Income: 65k to 112k,
Spending Score: 60-100

Segment 1: "Balanced Shoppers"

Annual Income: 35k to 65k,
Spending Score: 40-60

Segment 2: "Savvy Savers"

Annual Income: 65k to 112k,
Spending Score: 60-100

Segment 3: "Spending Optimists"

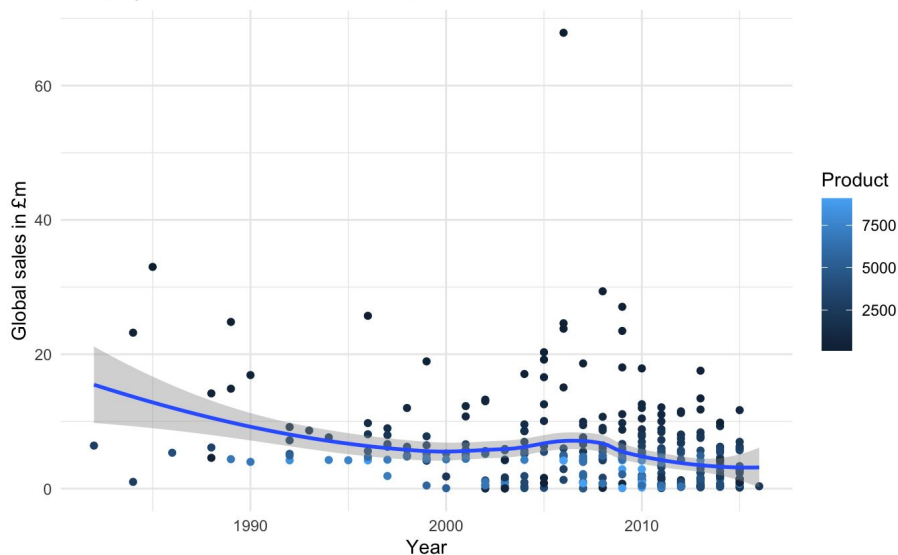
Annual Income: 10k to 38k,
Spending Score: 60-100

Segment 4: "Budget Essentials"

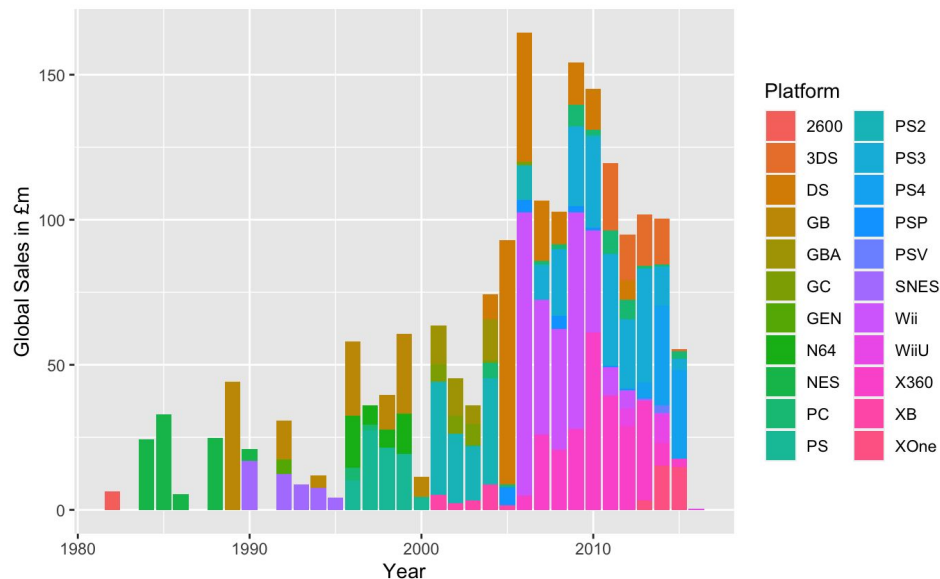
Annual Income: 10k to 38k,
Spending Score: 0-40

Post-2000, video game sales surged, resulting in a broader range of genres and titles. Turtle Games can boost sales by targeting popular products across key platforms and genres.

Scatterplot for Global Sales vs Product



Global Sales by Year and Platform



96%

of Global Sales variance and is explained by EU sales and North America. These variables exhibit positive correlations with global sales (0.84 and 0.91, respectively), both serving as statistically significant independent variables with p-values near 0%

Additional Questions to explore:

- **Explore multilinear regression** only on spend and income and exclude age and compare to our results presented today
- **Expand video game research** to investigate attributes like platform and genre, seeking correlations to identify best-sellers.
- **Analysis into the heavy tails of sales data** and their outliers
- **Utilize time-series analysis** on our regional sales data to uncover trends and seasonality patterns."



Turtle Games can enhance targeting by aligning offerings with income and spending patterns, utilizing loyalty point correlations and positive sentiment from reviews, with a focus on North America and the EU for long-term revenue growth

1. **Enhance Loyalty Programs:** Customise and strengthen loyalty programs for each customer segment, fostering long-term loyalty and repeat sales.
2. **Segmented Targeting:** Tailor marketing and products to customer segments based on income and spending for increased engagement and sales.
3. **Leverage Positive Sentiment:** Utilise positive reviews in marketing to enhance customer satisfaction and sales.
4. **Popular Genres and Platforms:** Invest in popular video game genres and platforms to expand the product range and boost sales.
5. **Forecasting:** Utilise the multilinear regression model to predict global sales using EU and NA sales data, enhancing clarity and improving business planning.
6. **Continuous Data Analysis:** Monitor customer purchase data for evolving trends and adapt marketing strategies in real-time to drive sales growth.