

WINE CONSUMPTION ANALYSIS

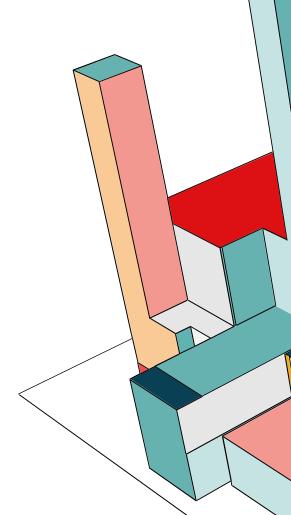
Advanced Programming in Python | Barcelona | May 20th 2025

Group D

Darren Tan Timo Alexander Sachs Marc Folch Pomares Sergio Garcia Estaban Alex Casas

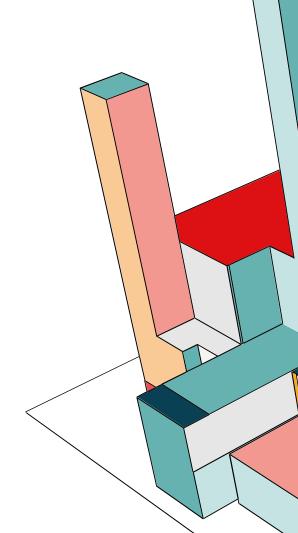
EXECUTIVE SUMMARY

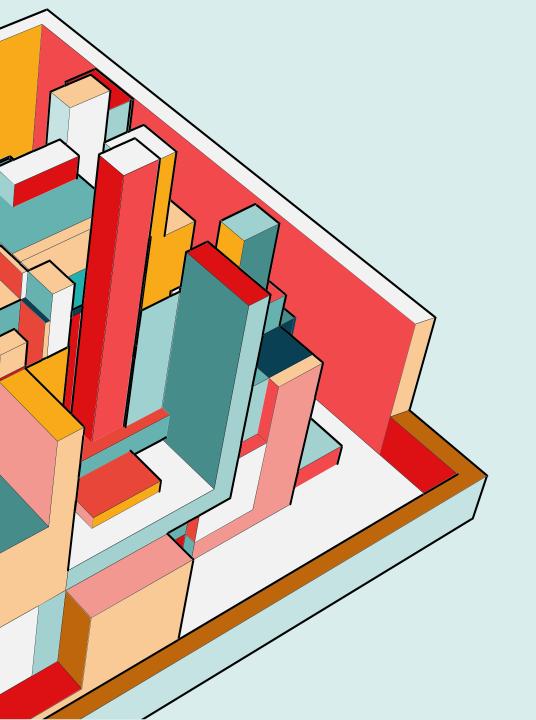
- The wine and delicatessen shop serves a diverse customer base with distinct patterns of behavior
- Core customer segment is the 31-40 age group, who purchase most frequently and have the most diverse consumption habits
- Most customers consume wine 1-2 times per week
- Parties represent the most common occasion for wine consumption, while restaurants command the highest average ticket values
- Product preferences show olives and Spanish ham as favorites across demographics, with minimal gender differences but significant age-related preferences
- The pricing structure reveals customer sensitivity to specific price points (€10, €50, €90), and cash remains the preferred payment method across all age groups



AGENDA

- 1. Customer Demographics
- 2. Product Mix
- 3. Consumption Patterns
- 4. Recommendations for action

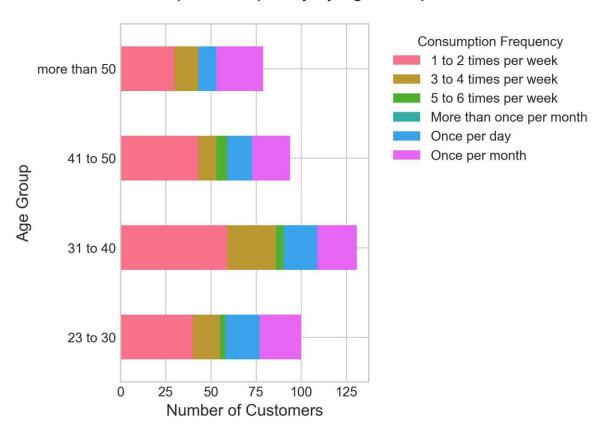




CUSTOMER DEMOGRAPHICS

RELATIVELY STABLE CONSUMPTION FREQUENCY PATTERS ACROSS AGE GROUPS WITH 31-40 AS LARGEST CUSTOMER SEGMENT

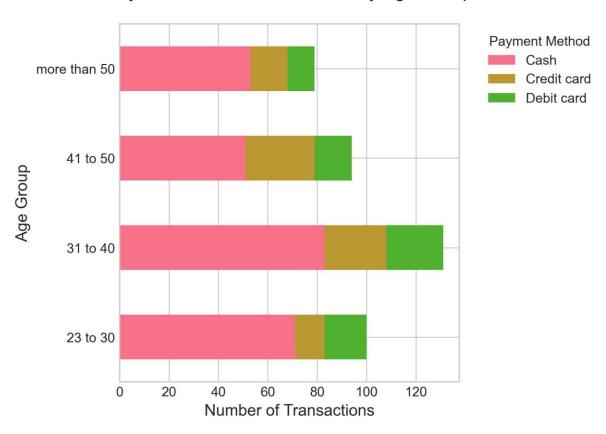
Wine Consumption Frequency by Age Group



- 31-40 age group represents largest customer segment and shows the most diverse consumption patterns
- "1 to 2 times per week" is the most common consumption frequency across all age groups, indicating a regular but moderate wine drinking habit
- 41-50 age group has a notable proportion of customers drinking wine "Once per day," suggesting potential for premium regular purchases

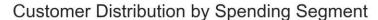
CASH IS KING: STABLE PAYMENT METHOD DISTRIBUTION ACROSS AGE GROUPS WITH STRONG PREFERENCE FOR CASH

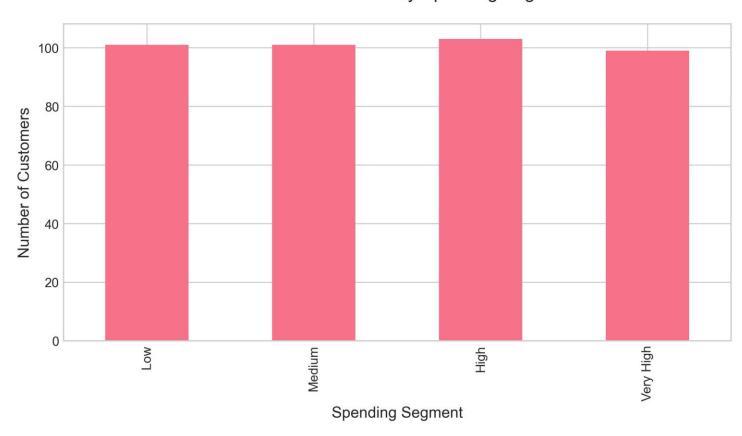
Payment Method Preferences by Age Group



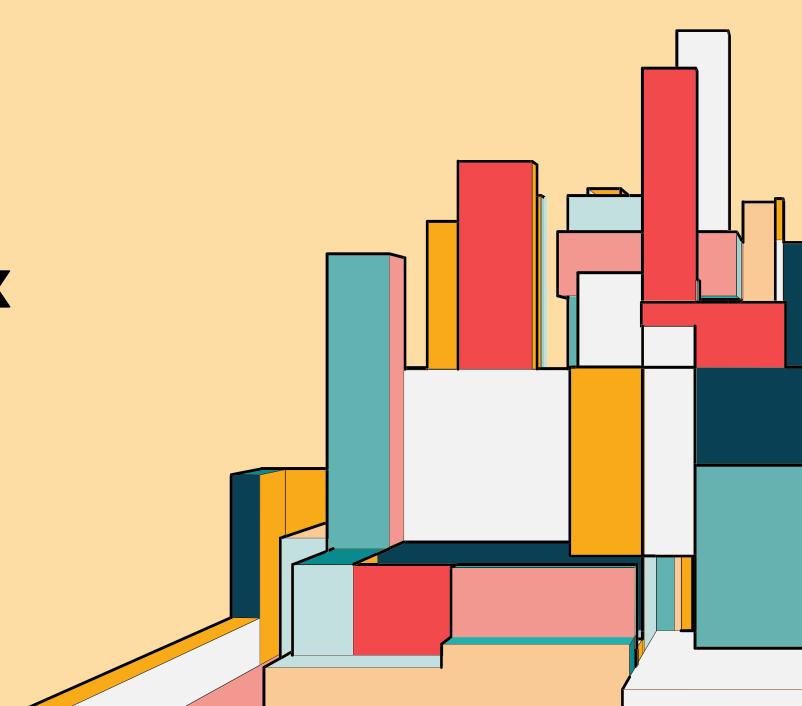
- Cash is the dominant payment method across all age groups, particularly for the 31-40 segment
- Credit card usage increases with age until 50, then decreases
- The 31-40 age group has the highest transaction volume overall, confirming them as your core customer base

CUSTOMER SEGMENT DISTRIBUTION SUGGESTS SYNTHETICALLY GENERATED DATASET DUE TO EVEN DISTRIBUTION OF CUSTOMERS



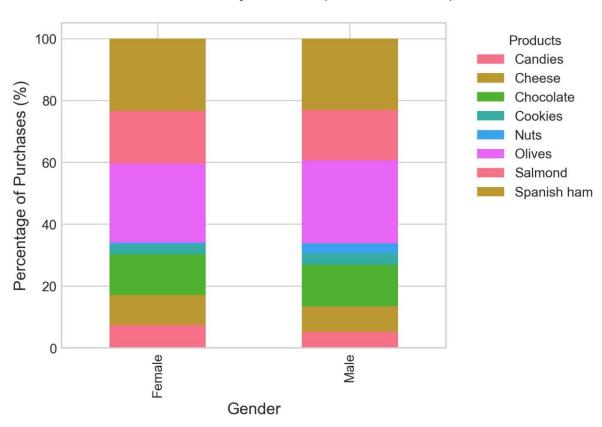


PRODUCT MIX ANALYSIS



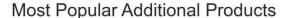
MINIMAL GENDER DIFFERENCES IN PRODUCT PREFERENCES, SUGGESTING MARKETING CAN BE LARGELY GENDER-NEUTRAL.

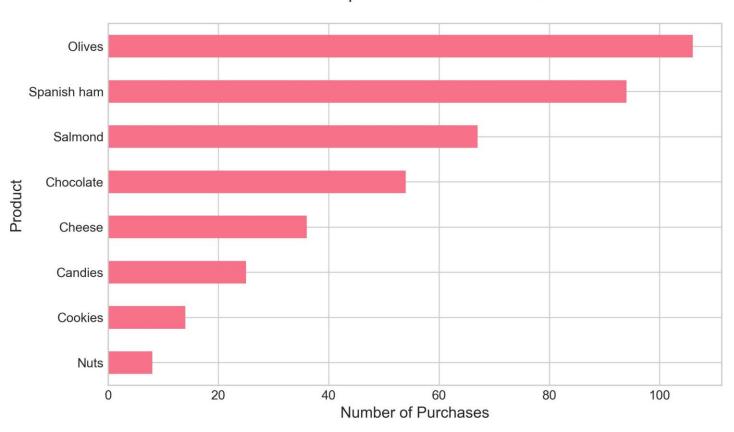




- Olives are equally popular among both genders, representing about 25% of purchases
- Spanish ham shows slightly higher preference among males

OLIVES AND HAM ARE BY FAR THE MOST POPULAR PRODUCTS TO ADD TO WINE; LOW PURCHASES FOR NUTS AND COOKIES

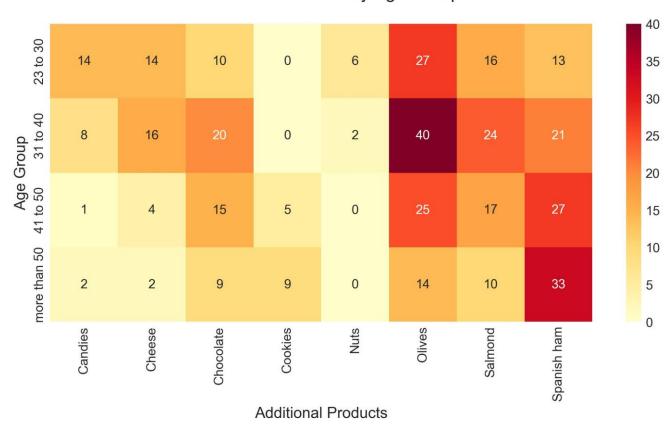




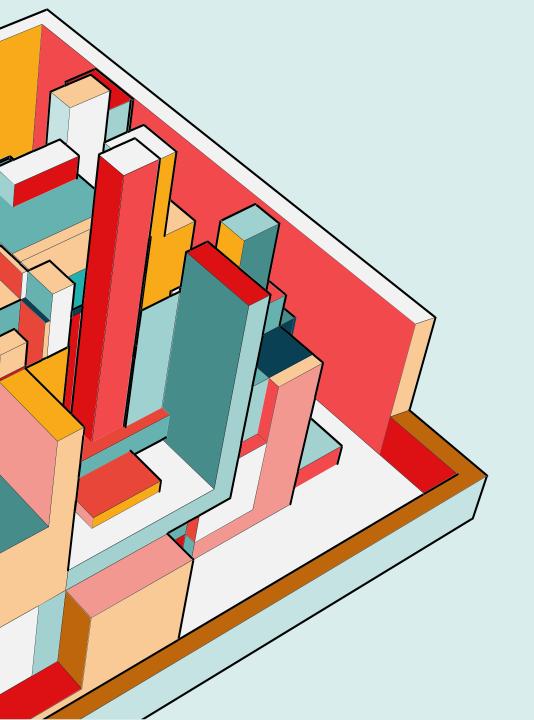
- Olives (100+ purchases) and Spanish ham (95+ purchases) are significantly more popular than other accompaniments
- Nuts have the lowest popularity (10 purchases), suggesting they could be removed or replaced
- Premium items (olives, Spanish ham, salmond) are more popular than cheaper snacks (cookies, nuts), indicating customers value quality pairings

DIFFERING WINE-PAIRING PRODUCT PREFERENCES ACROSS AGE GROUPS



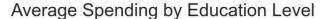


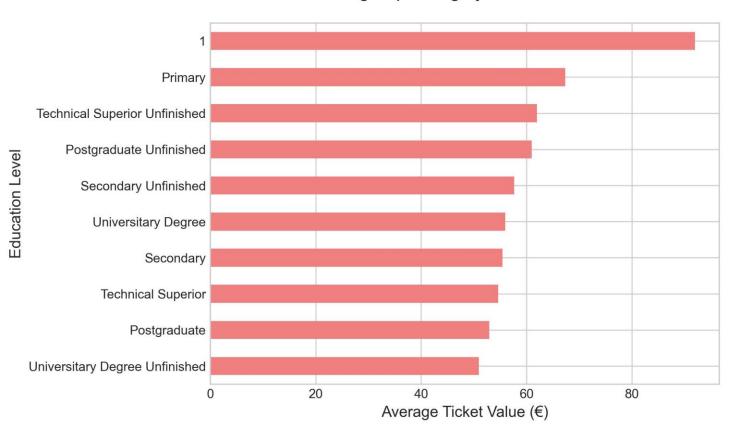
- Olives are extremely popular with the 31-40 age group (40 purchases)
- Spanish ham is most popular with the 50+ age group (33 purchases)
- Younger customers (23-30) favor candies and cheese more than other age groups, while showing minimal interest in cookies



CONSUMPTION BEHAVIOUR

HIGHER-THAN-EXPECTED SPENDING PATTERNS BY LOWER-LEVEL EDUCATION SEGMENTS

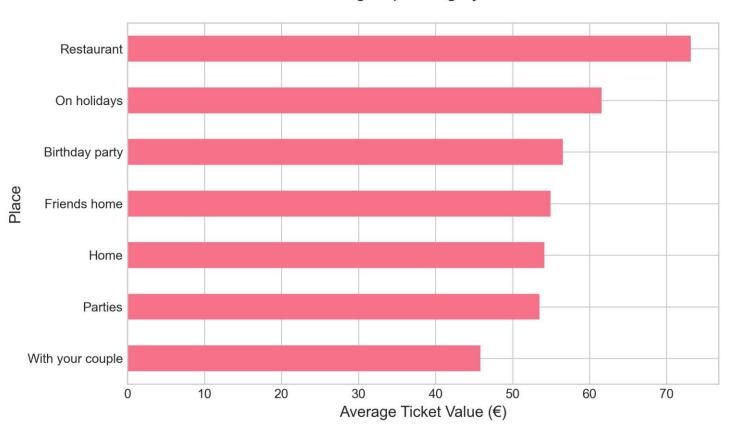




- Unusual pattern with highest spending by customers listed under education level "1" (€80+), → potential data labeling issue
- Primary education shows the second-highest spending (€60+), which is counterintuitive to typical income-education correlations
- University degree holders spend less (€50) than those with primary education, suggesting education level may not be a reliable predictor for targeting

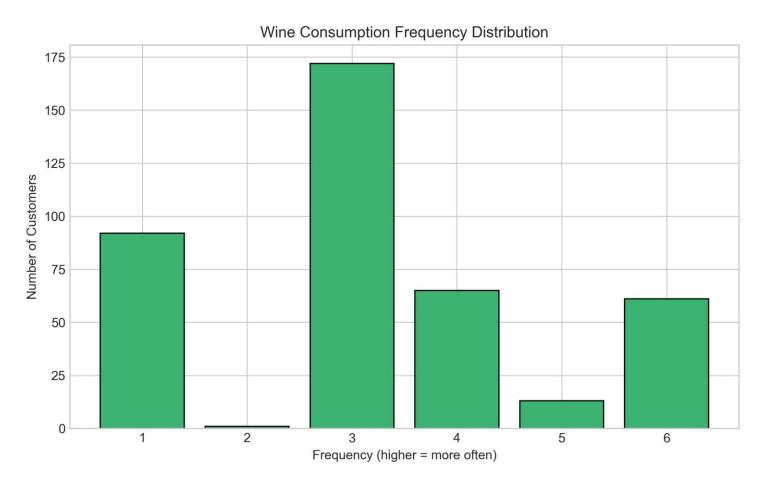
RESTAURANTS AND HOLIDAYS WITH LARGEST AVERAGE TICKET SPENDING





- Restaurants command the highest average ticket value (€70+), followed by holiday purchases (€65)
- "With your couple" has the lowest average spending (€48), indicating potential for promotions targeting romantic occasions
- Birthday parties show moderate spending (€55), suggesting customers are willing to spend more for special occasions

DISTINCT FREQUENCY CONSUMPTION PATTERN WITH MOST CUSTOMERS CONSUMING WINE 1 TO 2 TIMES PER WEEK

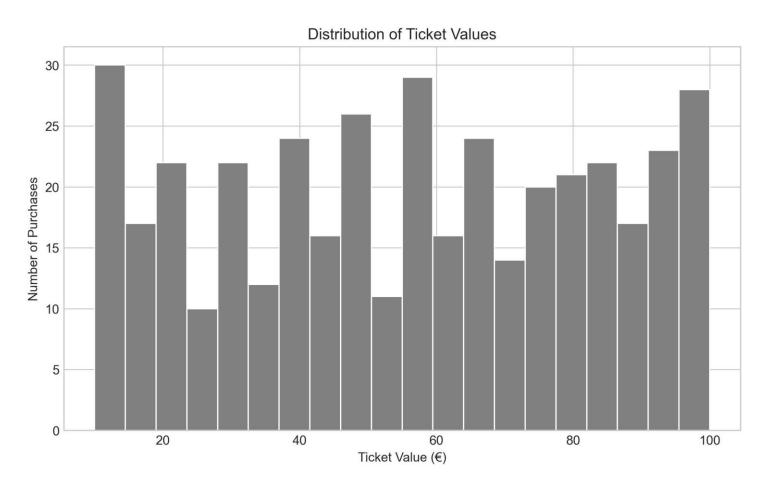


- 1-2 times weekly consumers represent largest market (46%), presenting primary targeting opportunity
- Clear polarization between occasional (24%) and regular consumers (76%)

Key

- 1 Once per month
- 2 More than once per month
- 3 1 to 2 times per week
- 4 3 to 4 times per week
- 5 5 to 6 times per week
- 6 Once per day

BROAD RANGE OF TICKET VALUE DISTRIBUTION WITH PEAKS IN THE LOW, MID AND HIGH RANGE



- Ticket values show three distinct peaks at €10, €50, and €90, indicating potential price point thresholds that customers respond to
- Most purchases occur at the €10 price point (30 purchases), suggesting a significant market for lower-priced items
- Relatively consistent purchasing behavior across the middle price ranges (€30-€80), showing a healthy distribution of spending



RECOMMENDATIONS FOR ACTION

Product Mix

- Expand olive and Spanish ham selections given their universal popularity
- Consider reducing or repositioning nuts given their low sales performance
- Create bundled offerings pairing wine with age-appropriate accompaniments (e.g., Spanish ham for 50+, olives for 31-40)

Pricing Strategy

- Structure promotions around the identified key price thresholds (€10, €50, €90)
- Create "party packages" at the €50 price point to capitalize on the most common wine consumption occasion
- Develop more premium offerings for the 41-50 age group who show daily wine consumption habits

Promotion

- Target the 31-40 age group as your primary demographic with tailored promotions
- Develop party-focused offerings as this is the most popular consumption venue
- Create special romantic packages to increase spending in the "with your couple" category
- Implement a customer loyalty program targeted at weekly wine purchasers



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All further background information on the analysis can also be found on GitHub

https://github.com/sachstimo/wine-datavisualization

