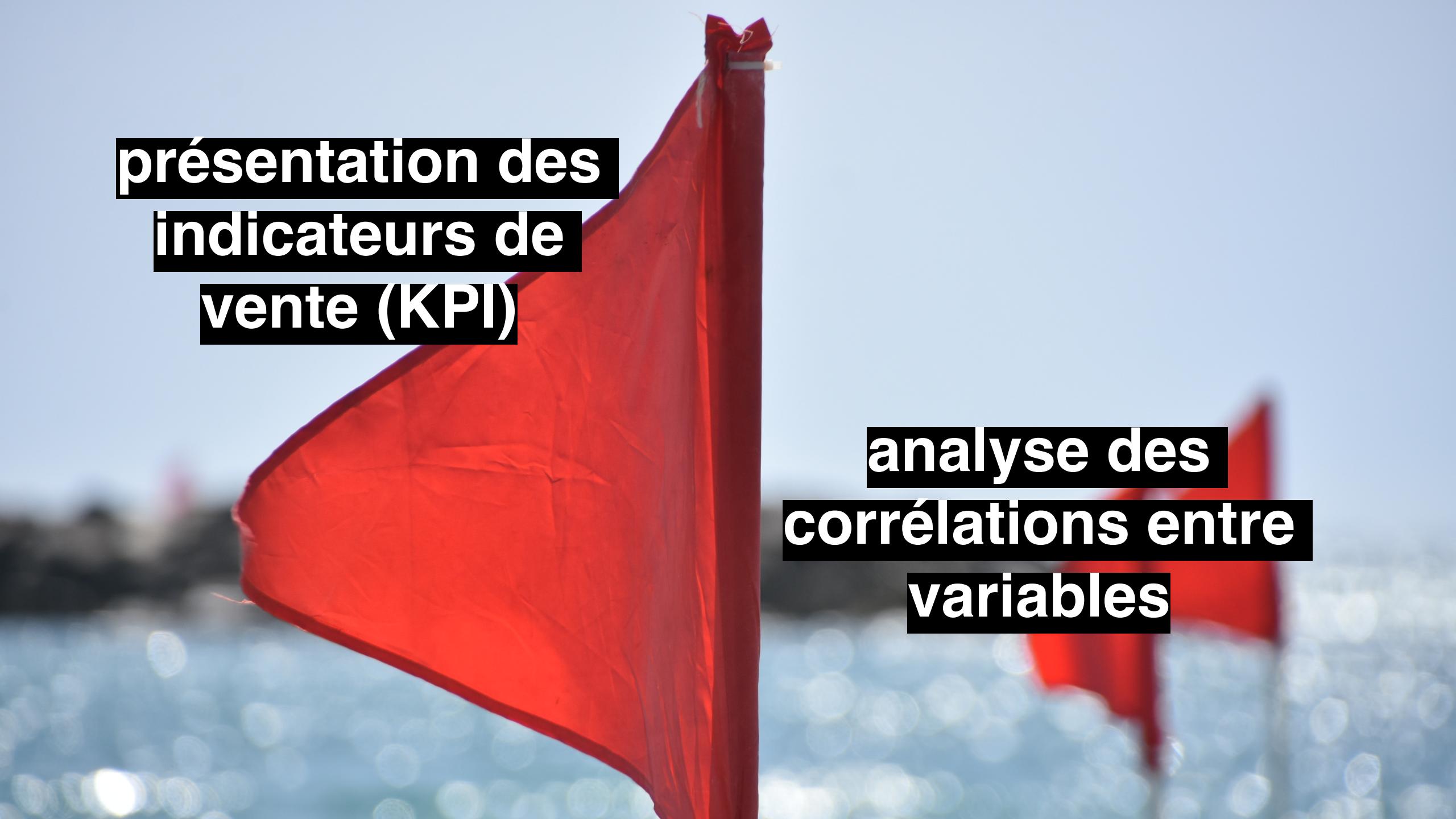


A woman with short, curly hair and glasses, wearing a leopard-print shirt, is standing in a library. She is looking up at the top shelf of a bookshelf, her head tilted back. The shelves are filled with books of various colors. The lighting is warm and focused on her face and the books.

Analysez les ventes d'une librairie avec Python

février 2024



A red flag is flying in the wind against a clear blue sky. The flag is attached to a wooden pole and is partially visible on the left side of the frame. The background shows a blurred landscape with some greenery and a body of water.

**présentation des
indicateurs de
vente (KPI)**

**analyse des
corrélations entre
variables**

bases de données initiales



PRODUCTS

id_prod

prix

catégorie

3 286 produits



CUSTOMERS

client_id

sexe

année de naissance

8 621 clients



TRANSACTIONS

id_prod

client_id

date

session_id



DATA



toutes les variables
+ **age bin**
+ **age**

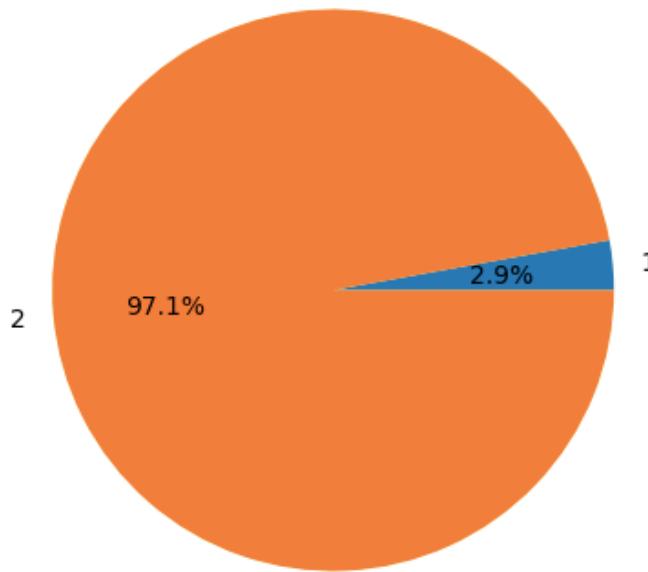
687 583 lignes

A photograph of a young man and woman in a bookstore. The man, with dark skin and curly hair, is wearing a light green button-down shirt over a white t-shirt. He is looking down at a book he is holding. The woman, also with dark skin and curly hair, is wearing a grey blazer over a yellow patterned top. She is looking at the same book. They are standing in front of wooden bookshelves filled with books. The lighting is warm and focused on them.

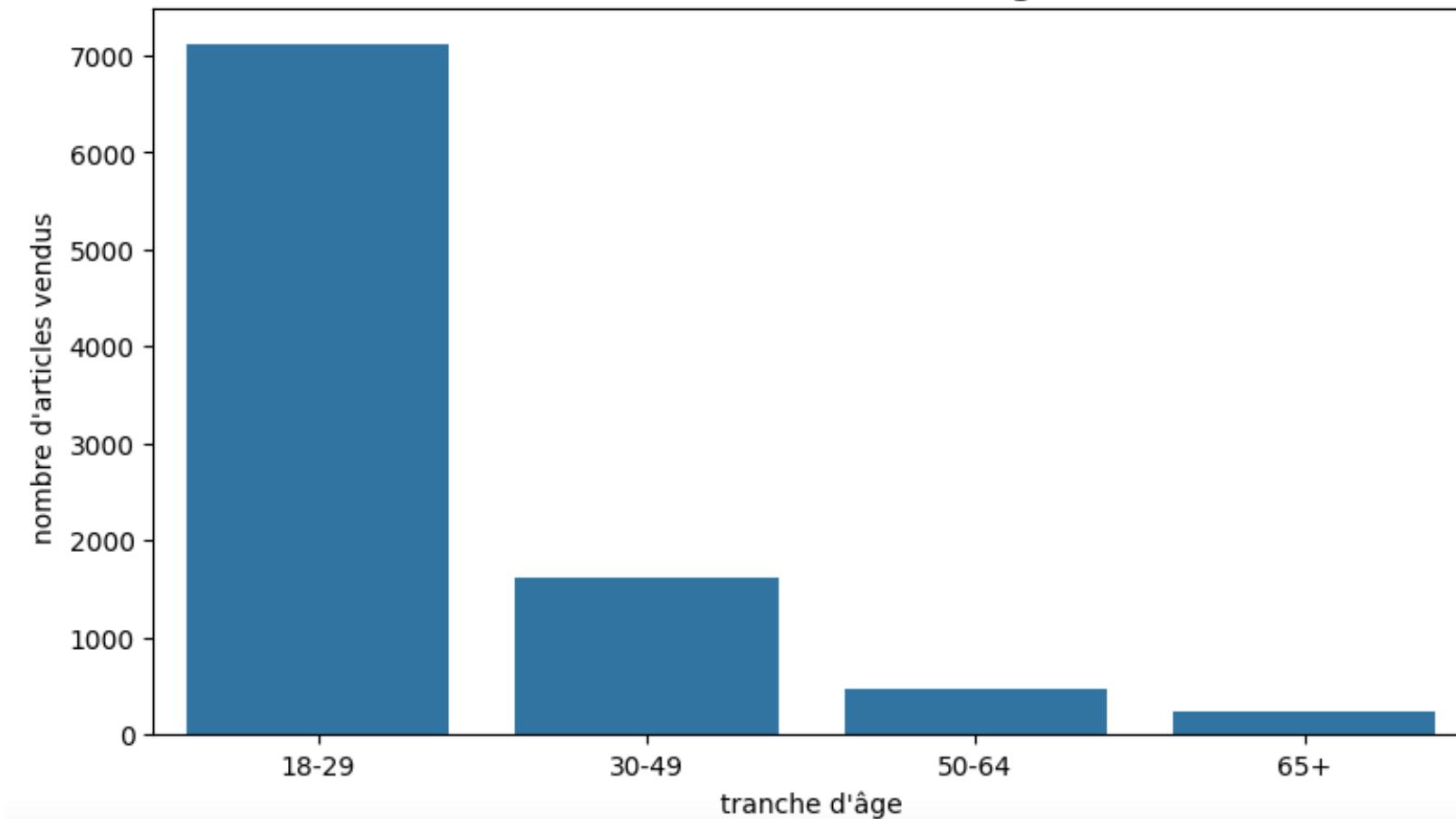
présentation des indicateurs de vente (KPI)

caractérisation des valeurs extrêmes

Répartition des outliers (z-score) par catégorie

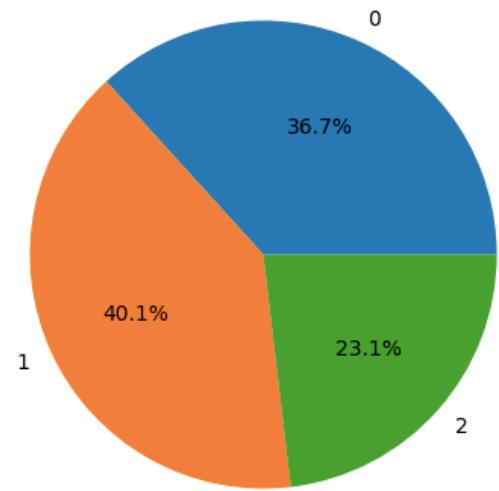


Nombre d'articles vendus selon la tranche d'âge (outliers en z-score)

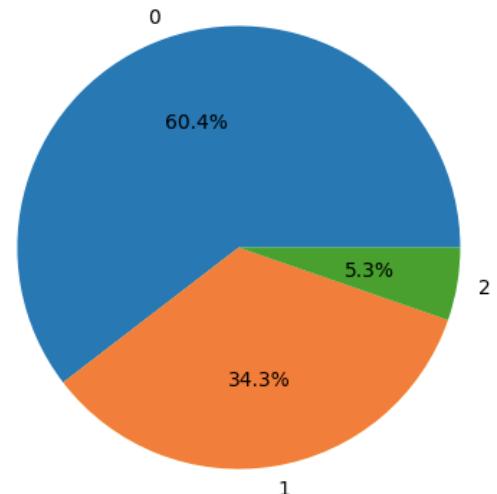


caractérisation de la variable » catégorie »

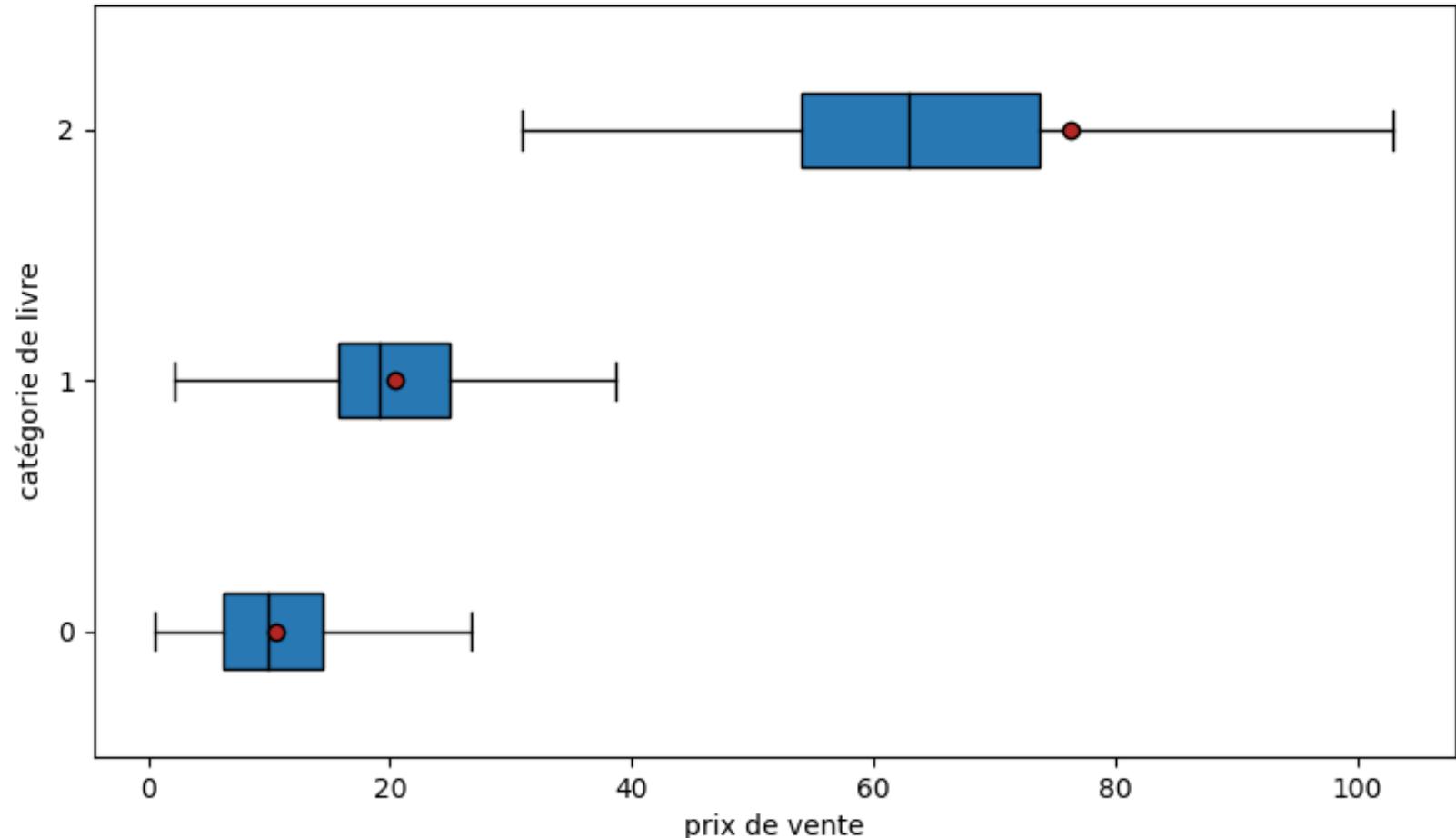
Répartition du CA total par volume



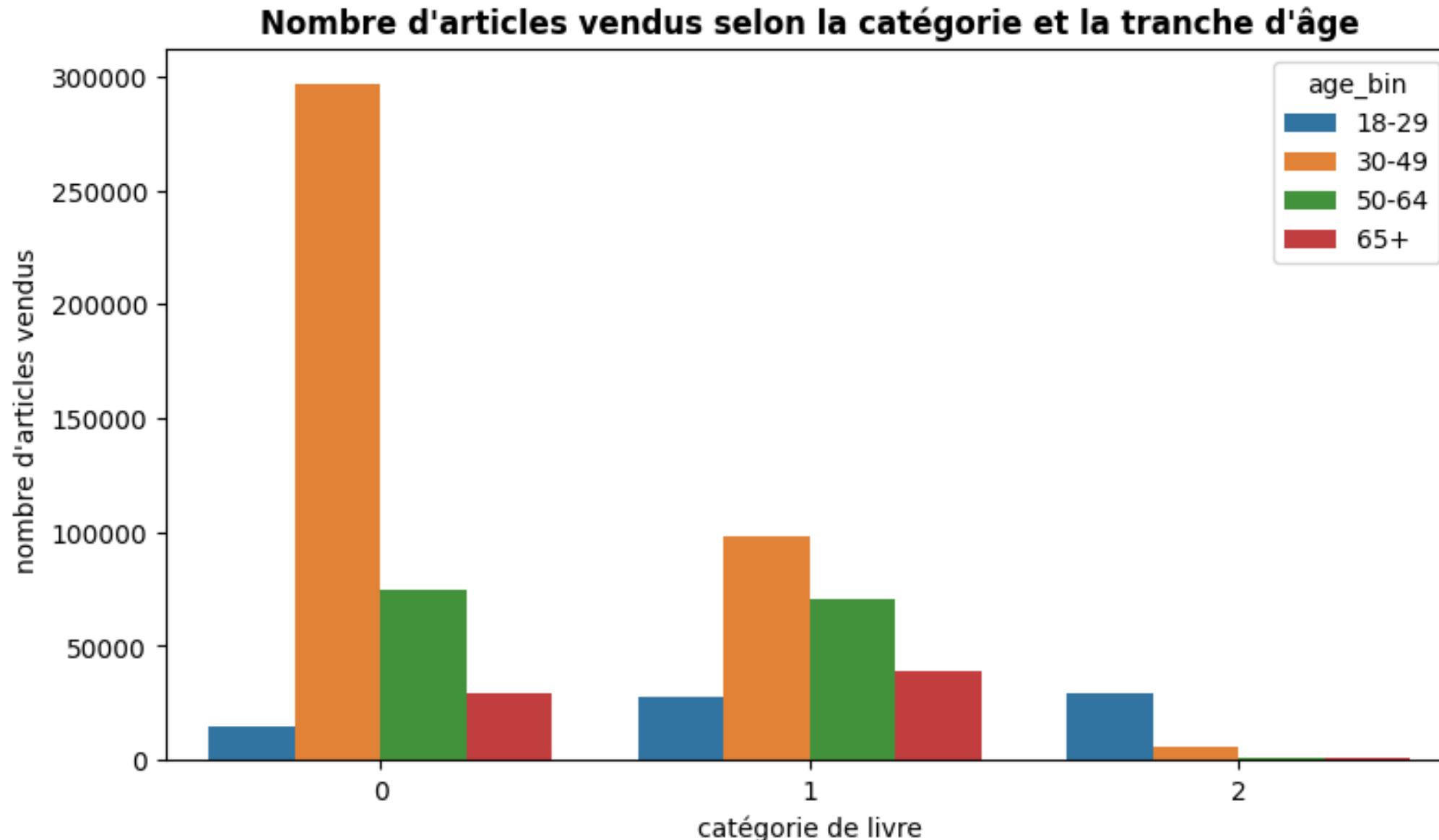
Répartition du CA total par quantités vendues



Répartition du prix de vente selon la catégorie de livre

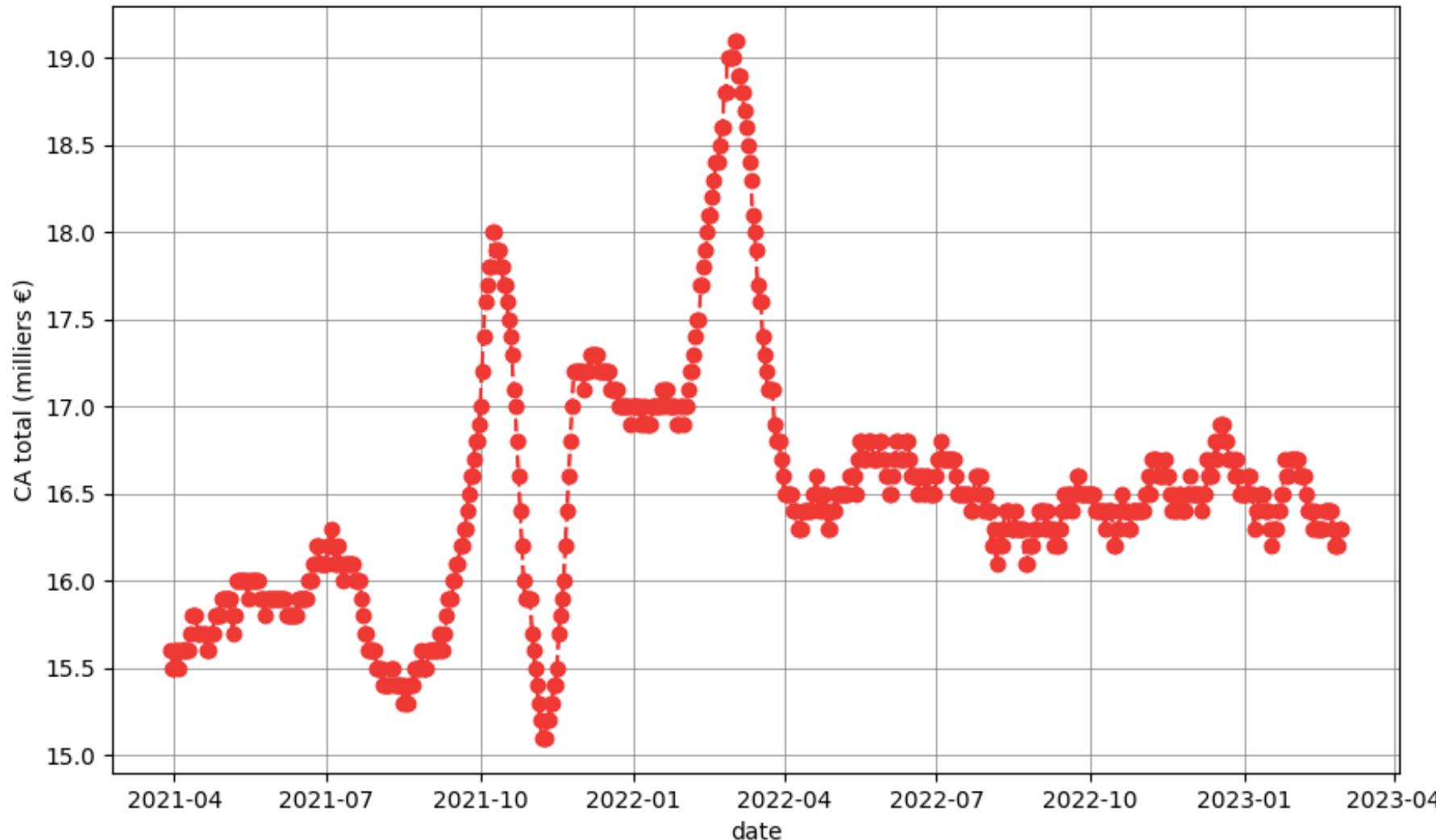


caractérisation de la variable » catégorie »

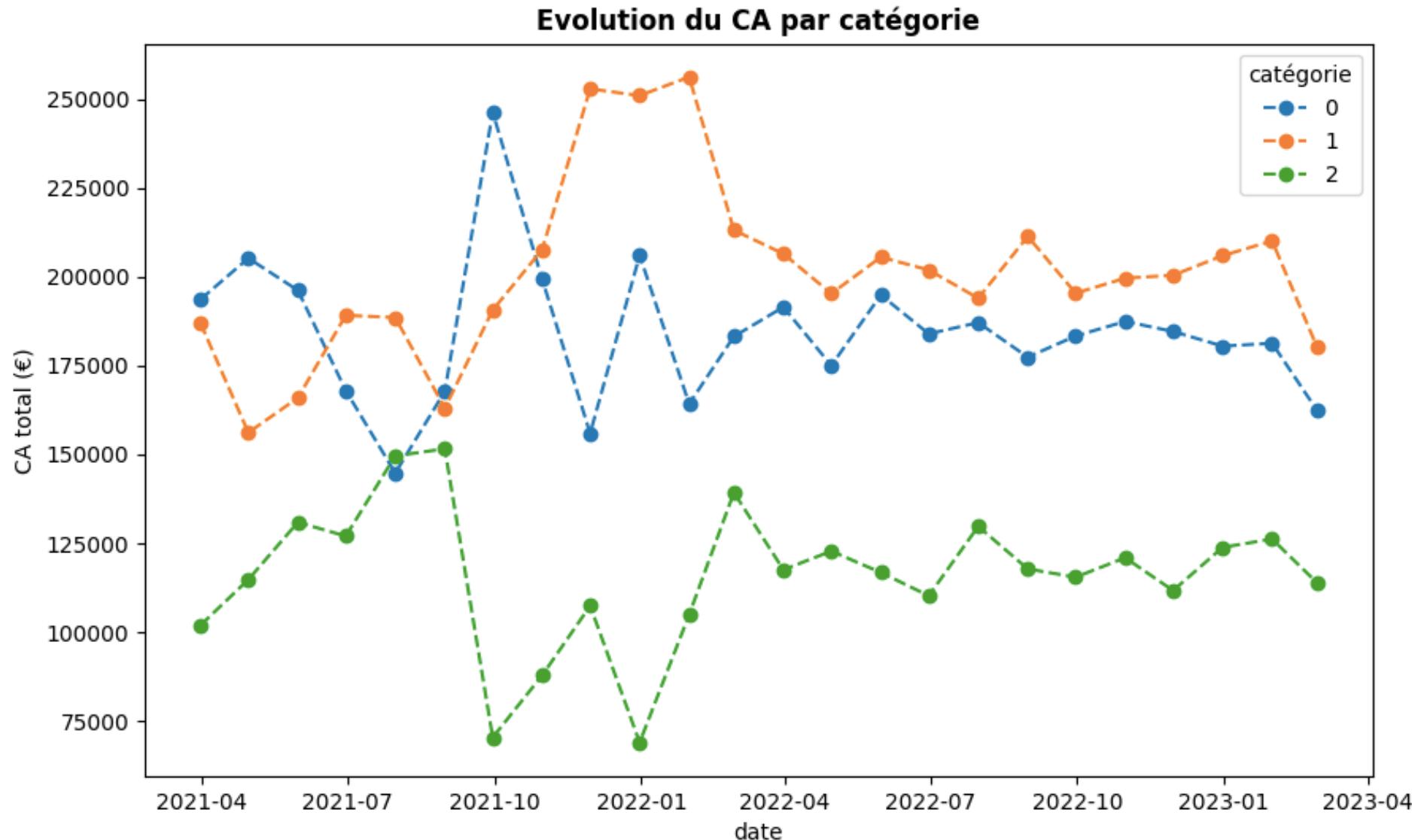


évolution du chiffre d'affaires

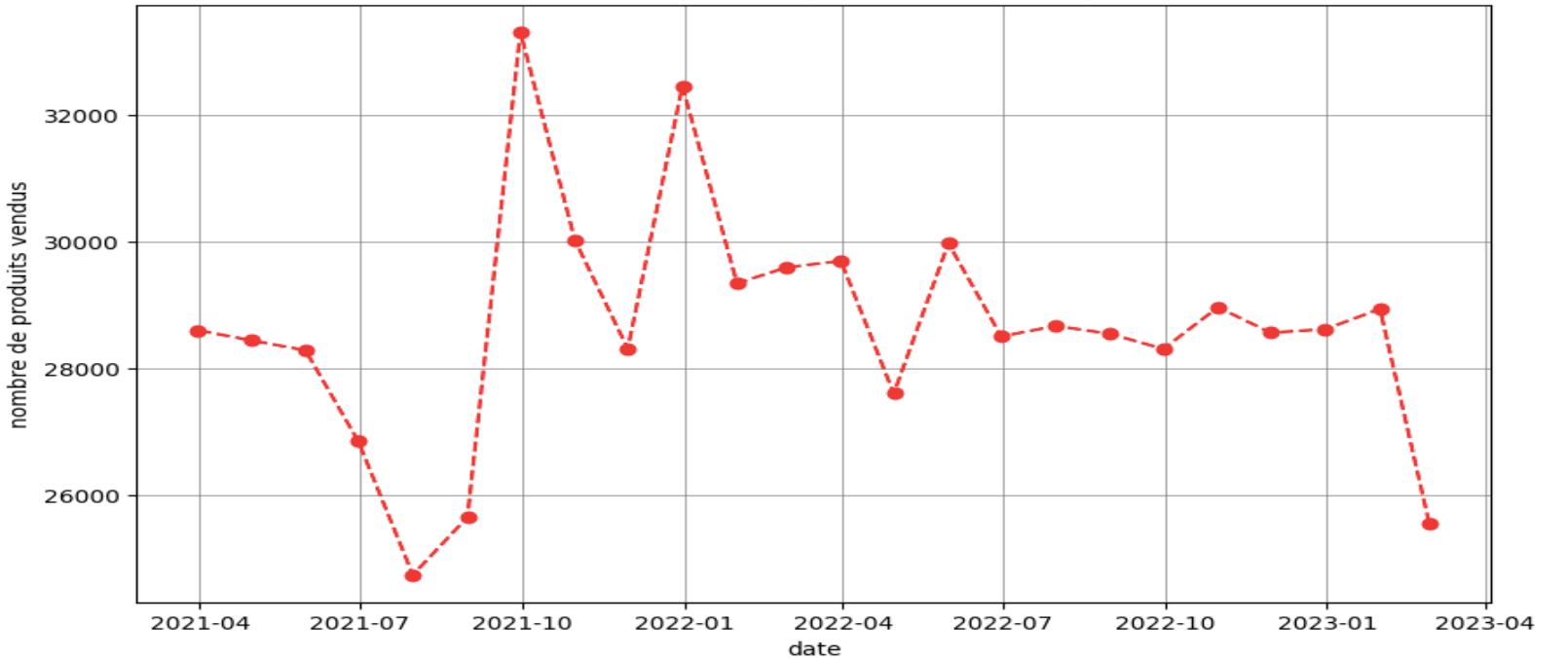
Evolution de la moyenne mobile journalière du CA



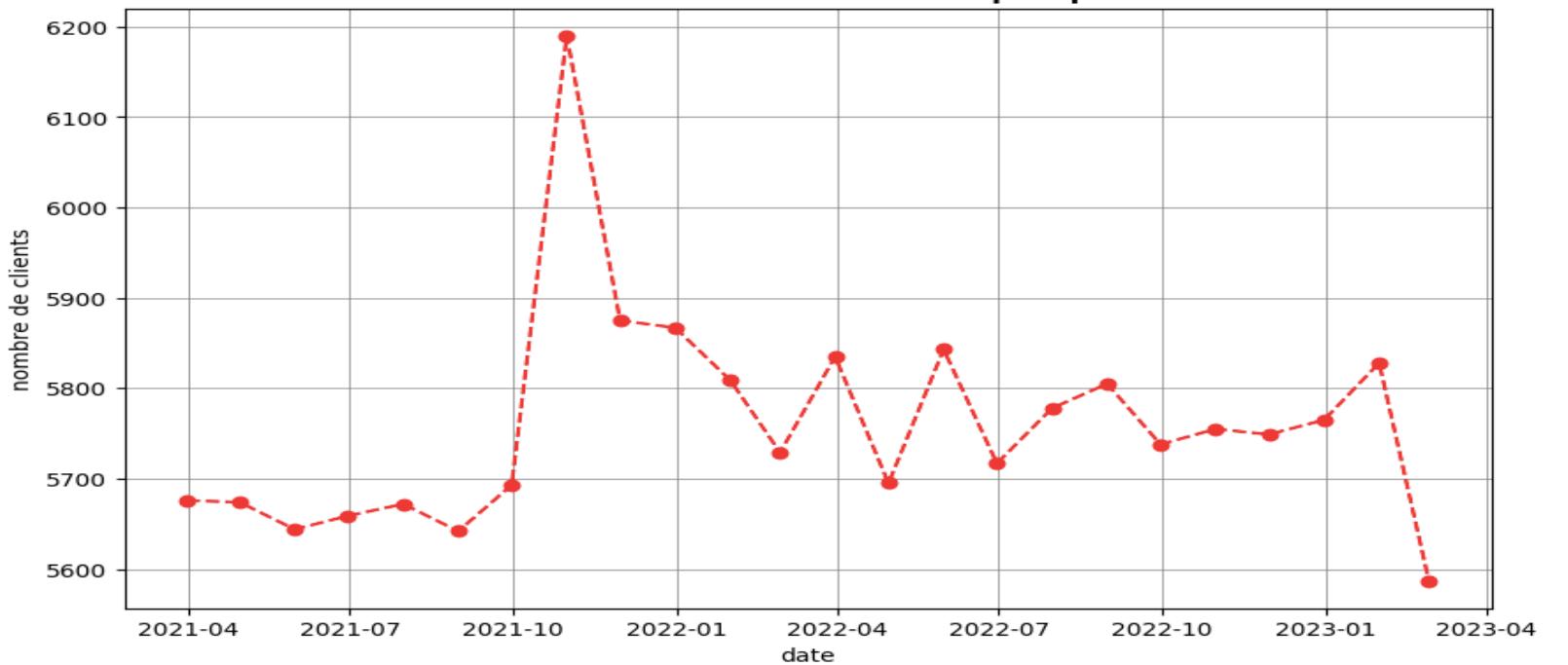
évolution du chiffre d'affaires



Evolution du nombre de produits vendus par mois

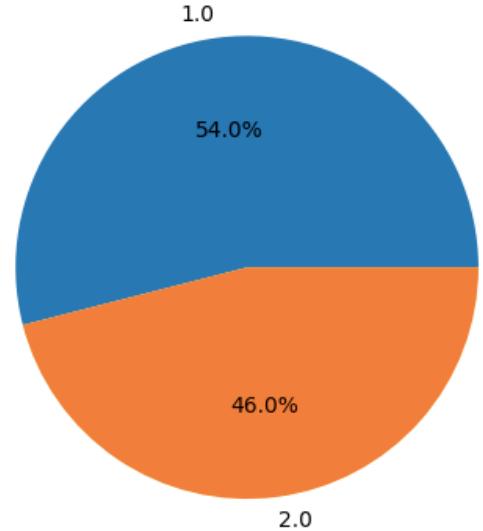


Evolution du nombre de clients uniques par mois

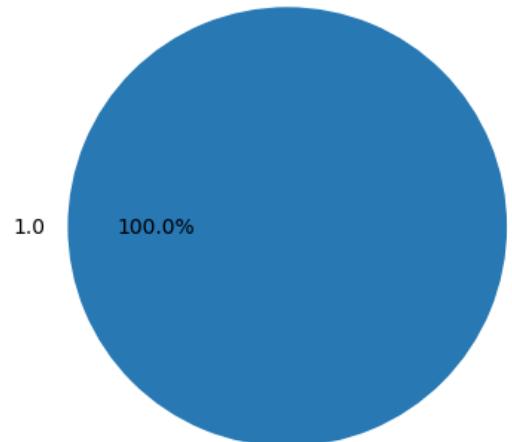


top 50 des articles par CA / quantités

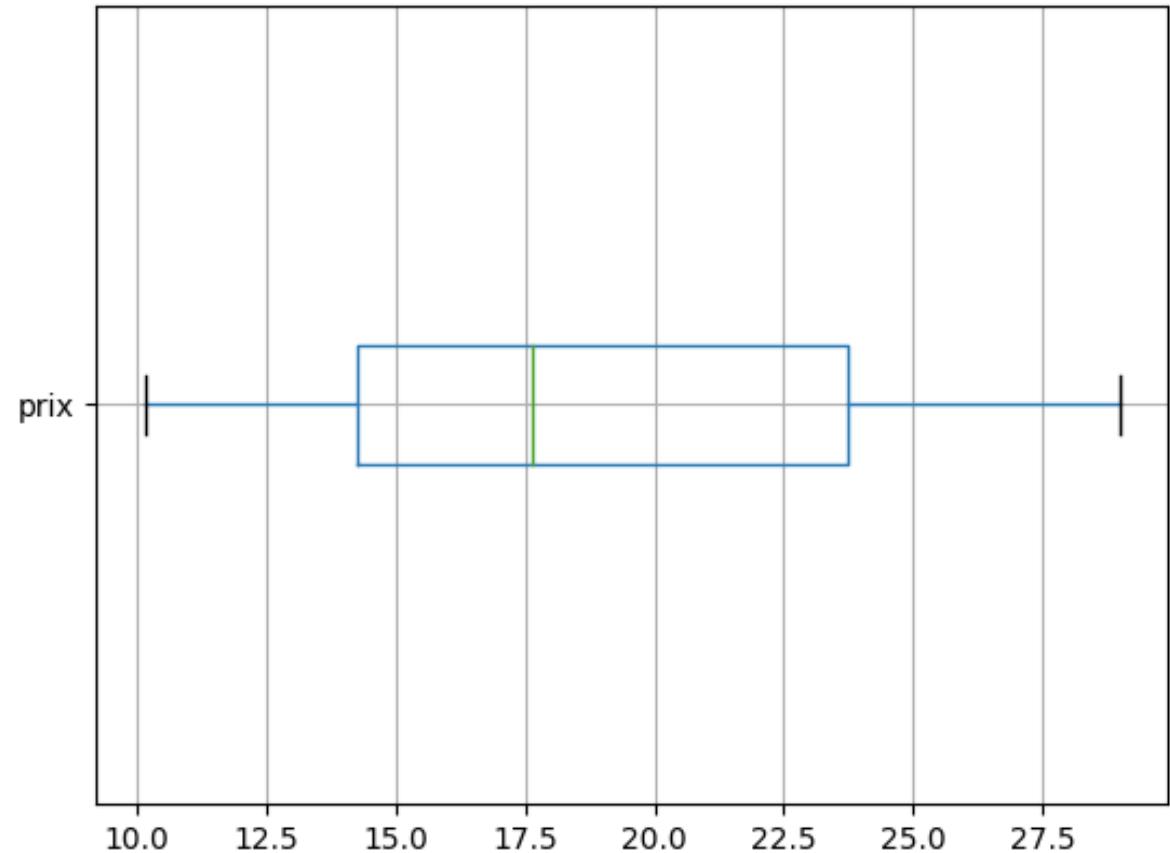
Répartition des articles du top 50 CA par catégorie



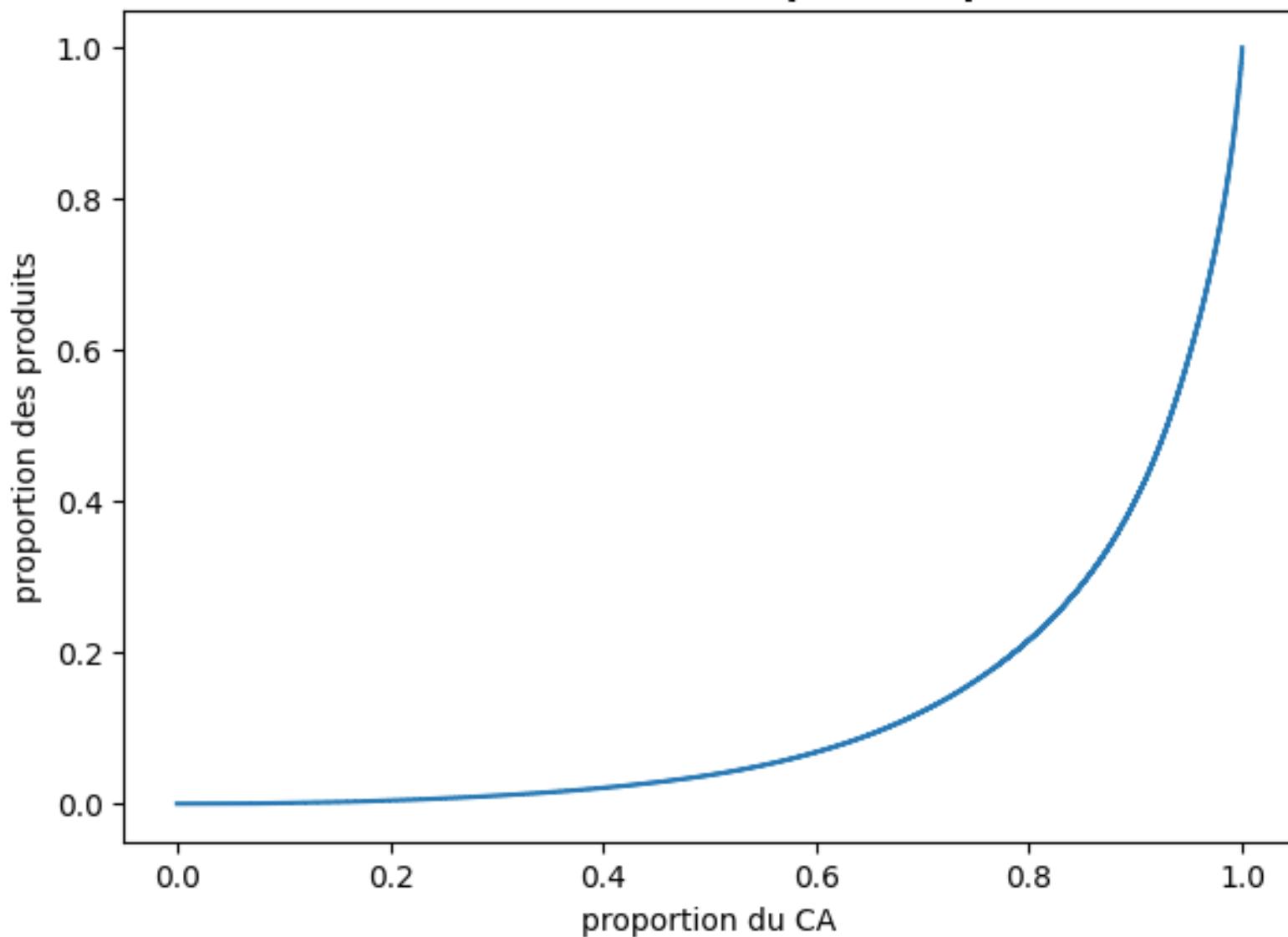
Répartition des articles du top 50 quantité par catégorie



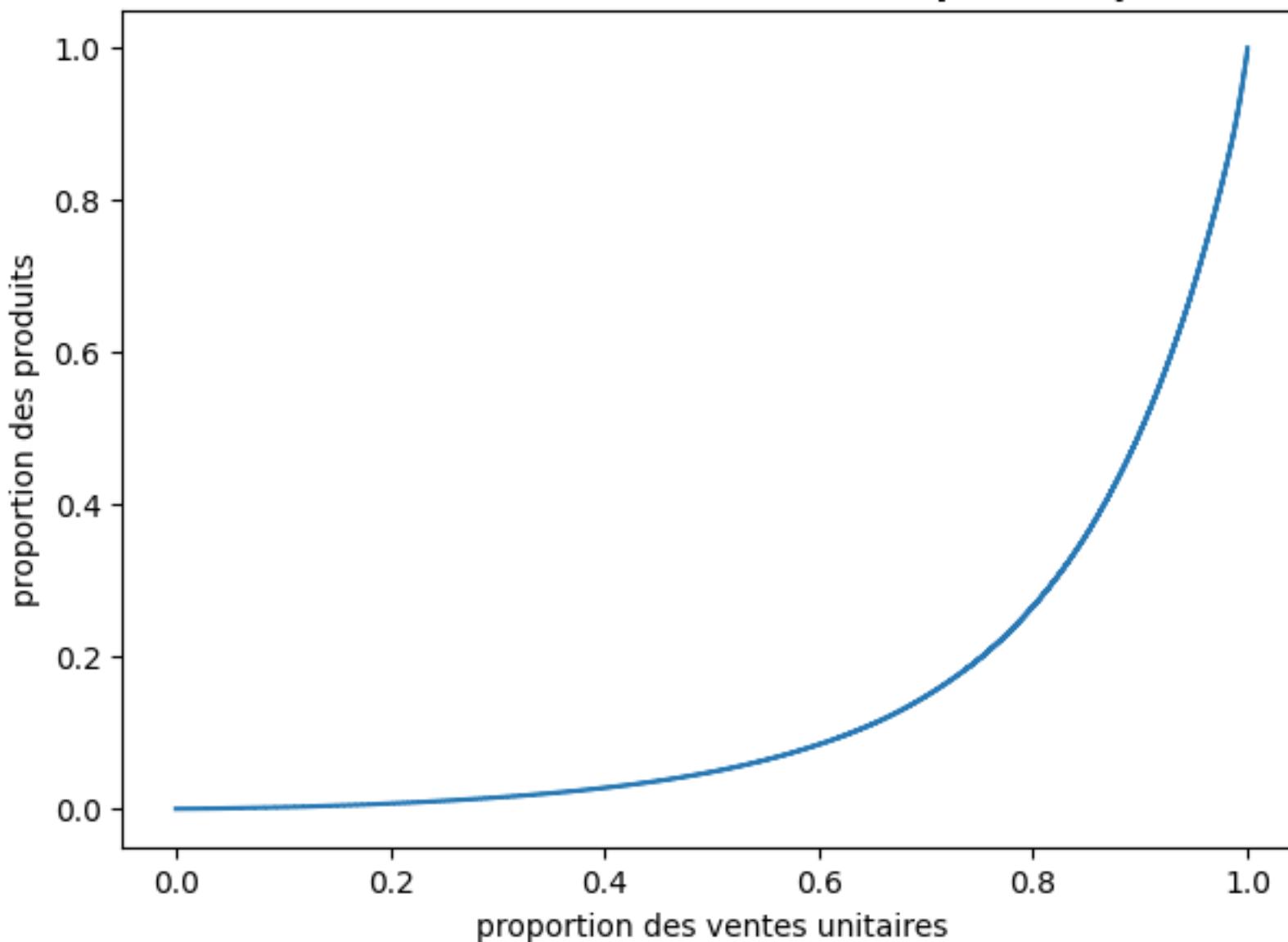
Répartition du prix de vente pour le top 50 des articles selon les quantités vendues



Courbe de Lorenz du CA pour les produits



Courbe de Lorenz des ventes unitaires pour les produits

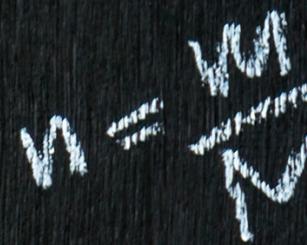
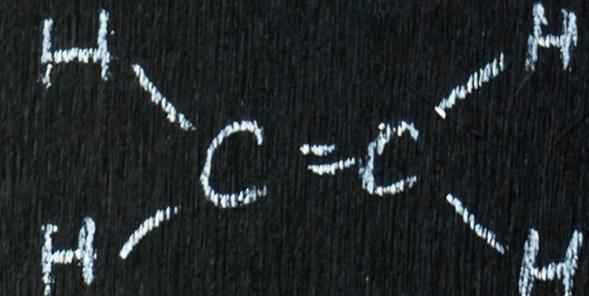
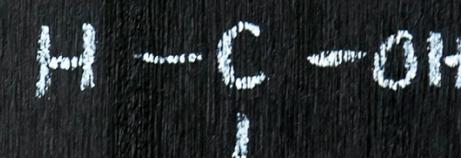


analyse des corrélations entre variables



X

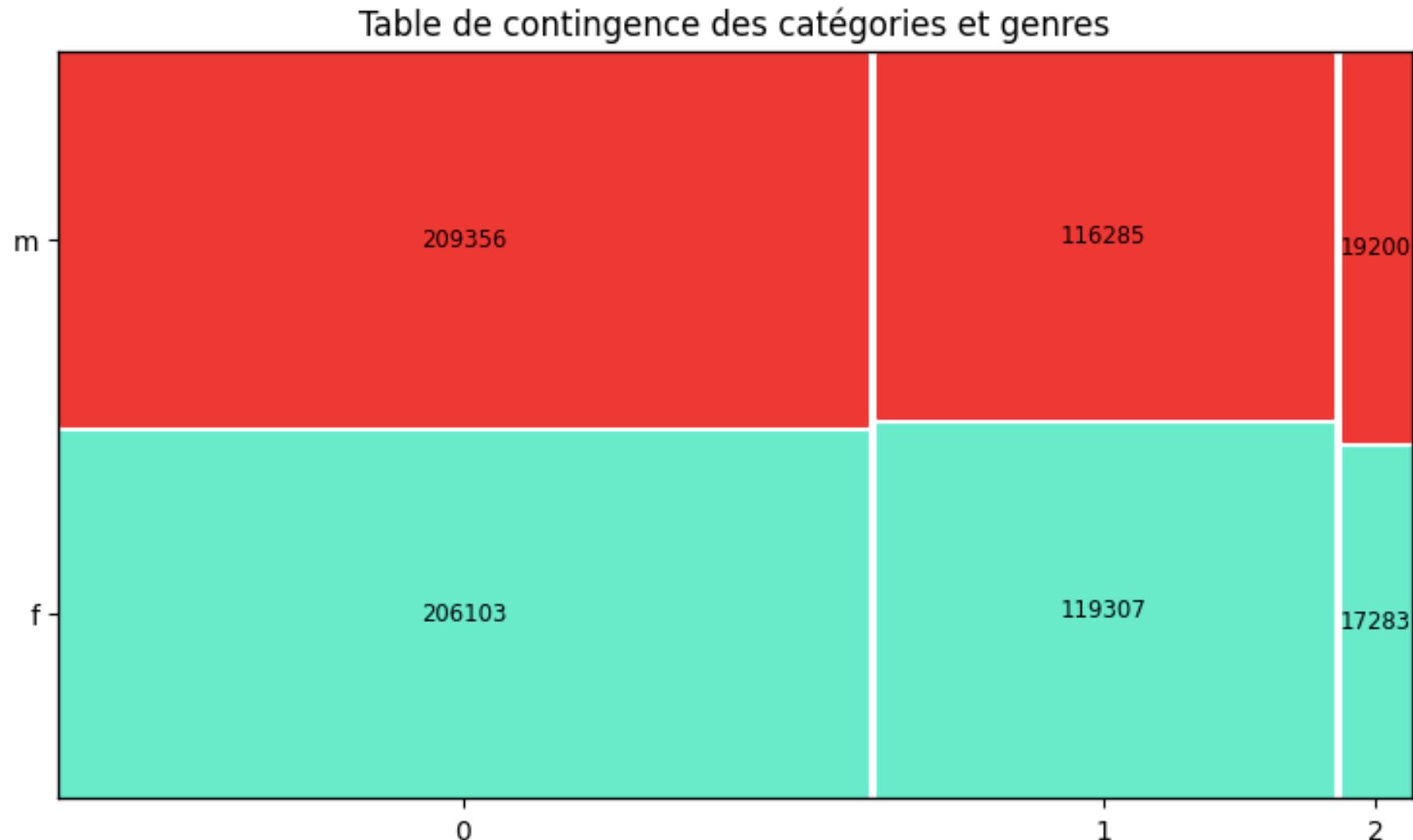
3



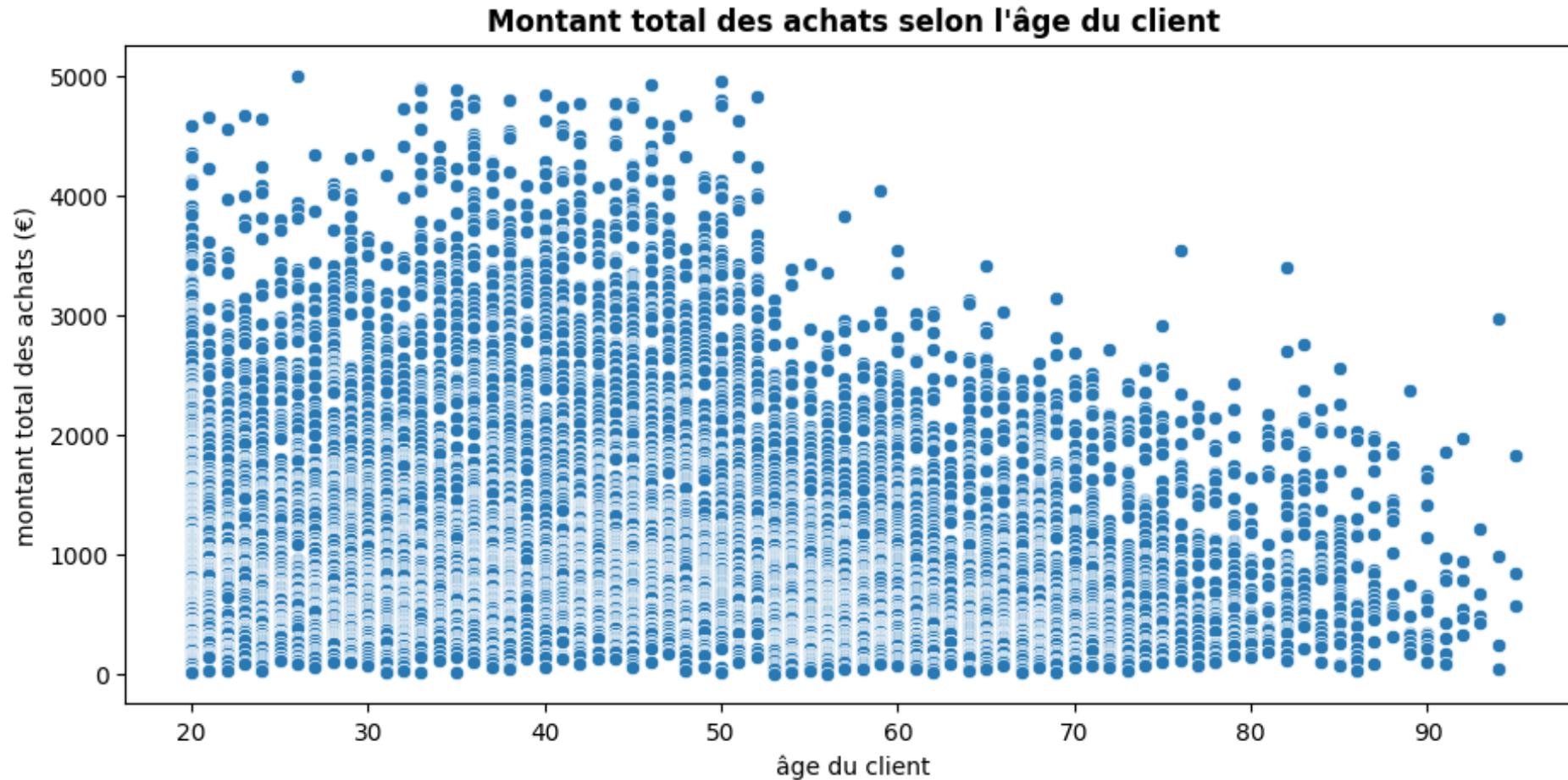
corrélation genre / catégorie

test paramétrique
**khi² sur un
tableau de
contingence**

p-value
1.4-31



corrélation âge / montant achats



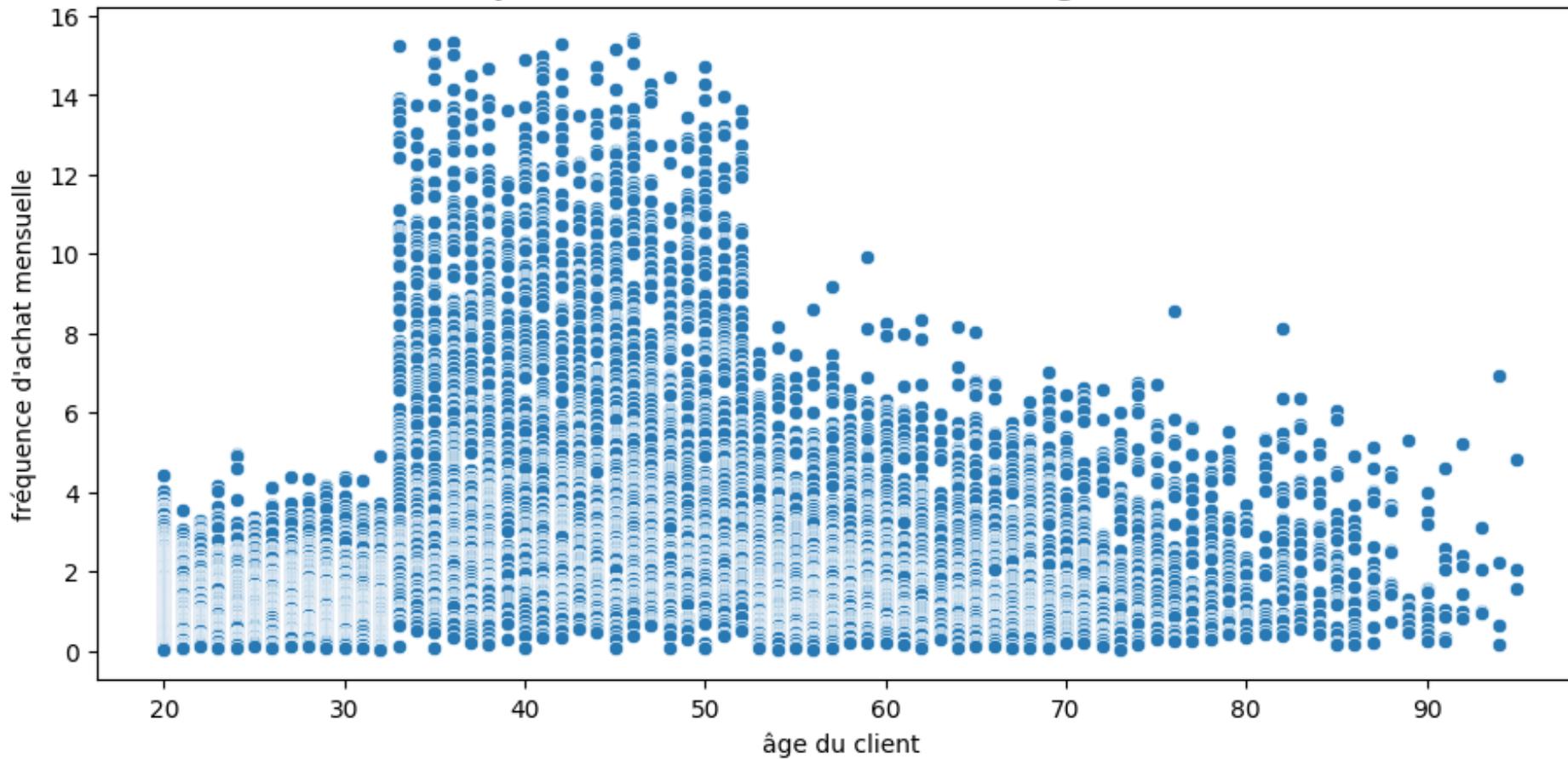
test non paramétrique
**corrélation de
Spearman**

p-value
1.0⁻⁶⁶

corrélation
-0.19

corrélation âge / fréquence d'achat

Fréquence d'achat mensuelle selon l'âge du client

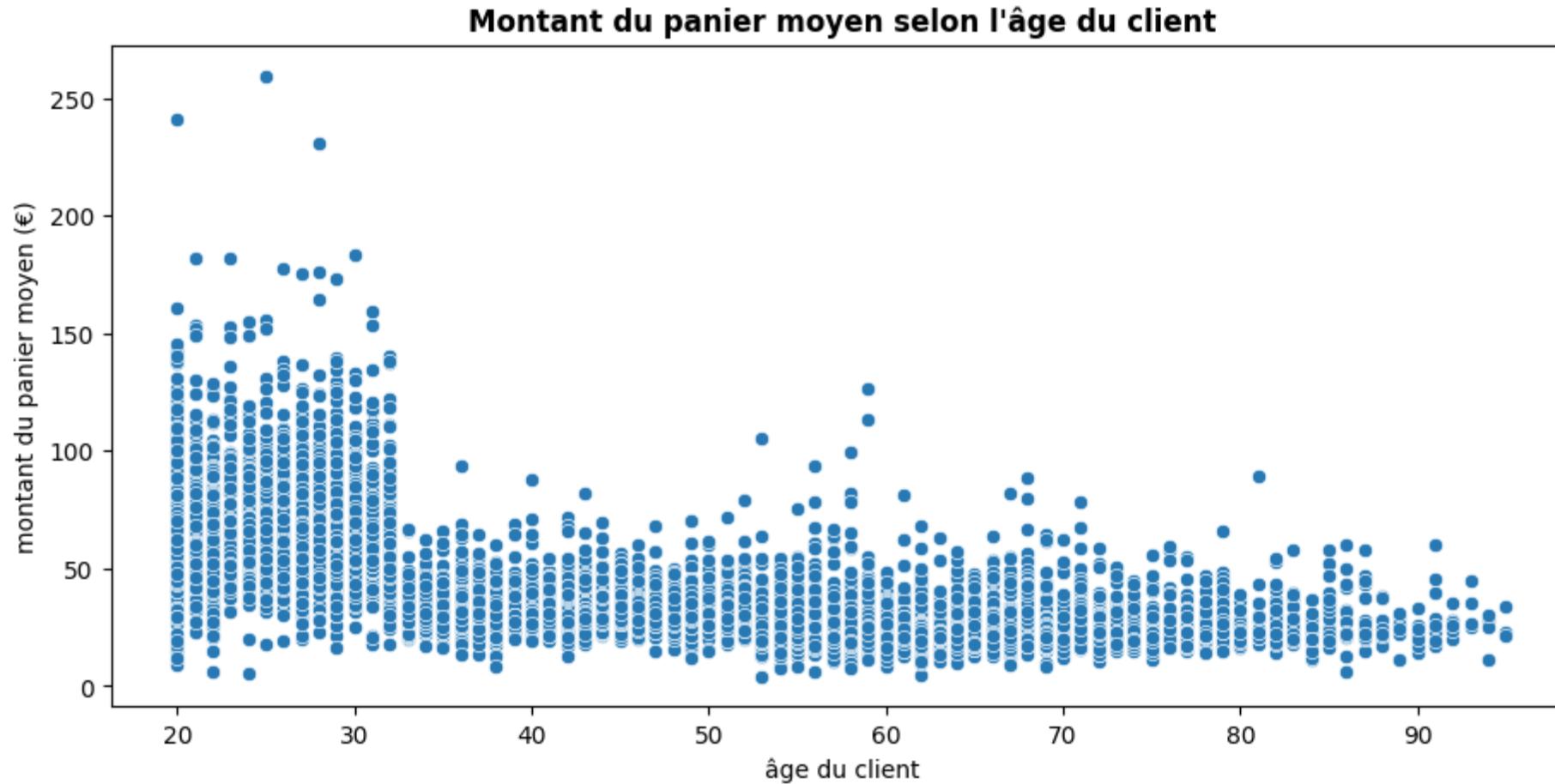


test non paramétrique
**corrélation de
Spearman**

p-value
 1.4^{-32}

corrélation
0.13

corrélation âge / montant panier moyen



test non paramétrique

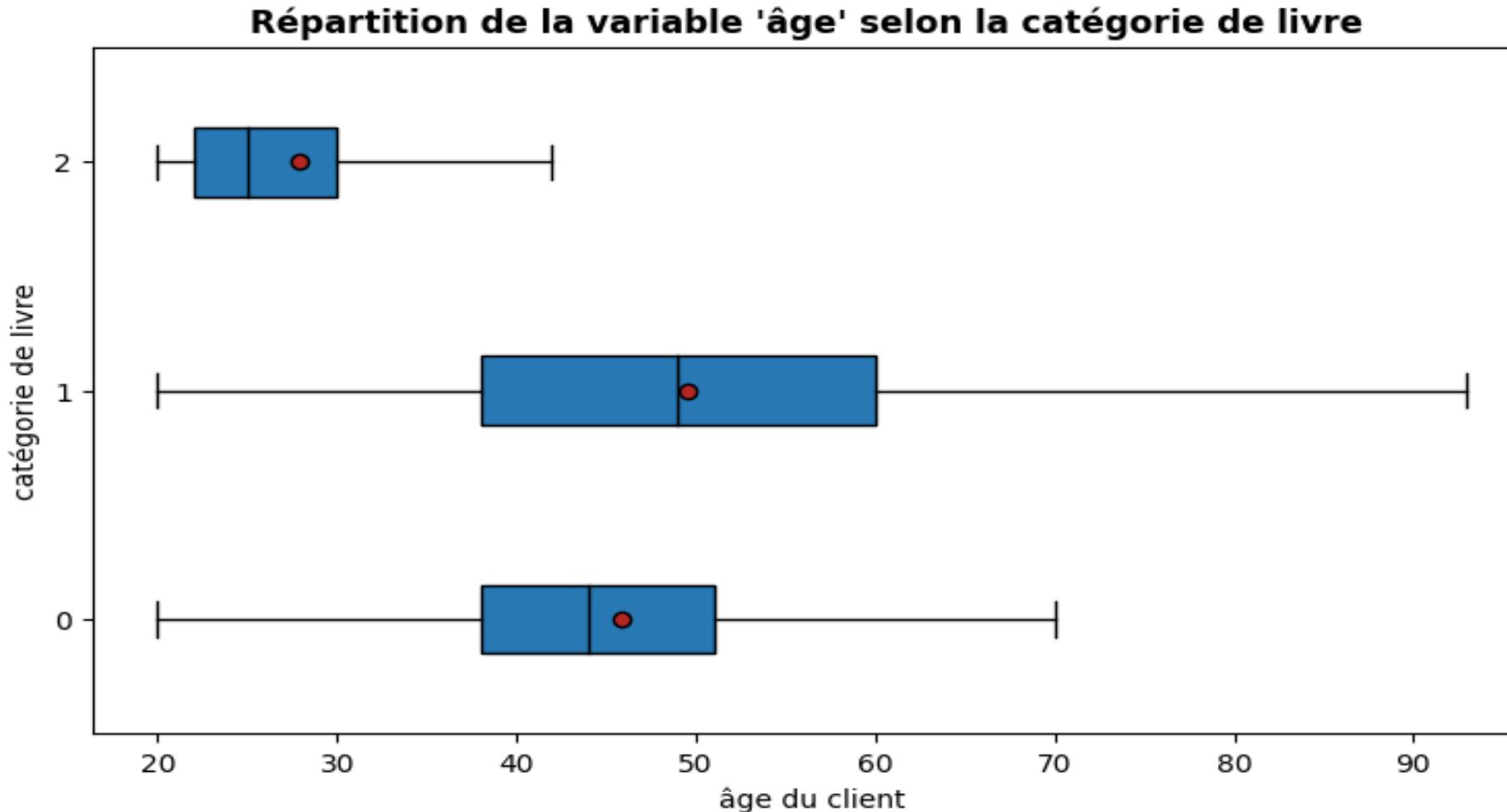
**corrélation de
Spearman**

p-value

0.0

corrélation
-0.70

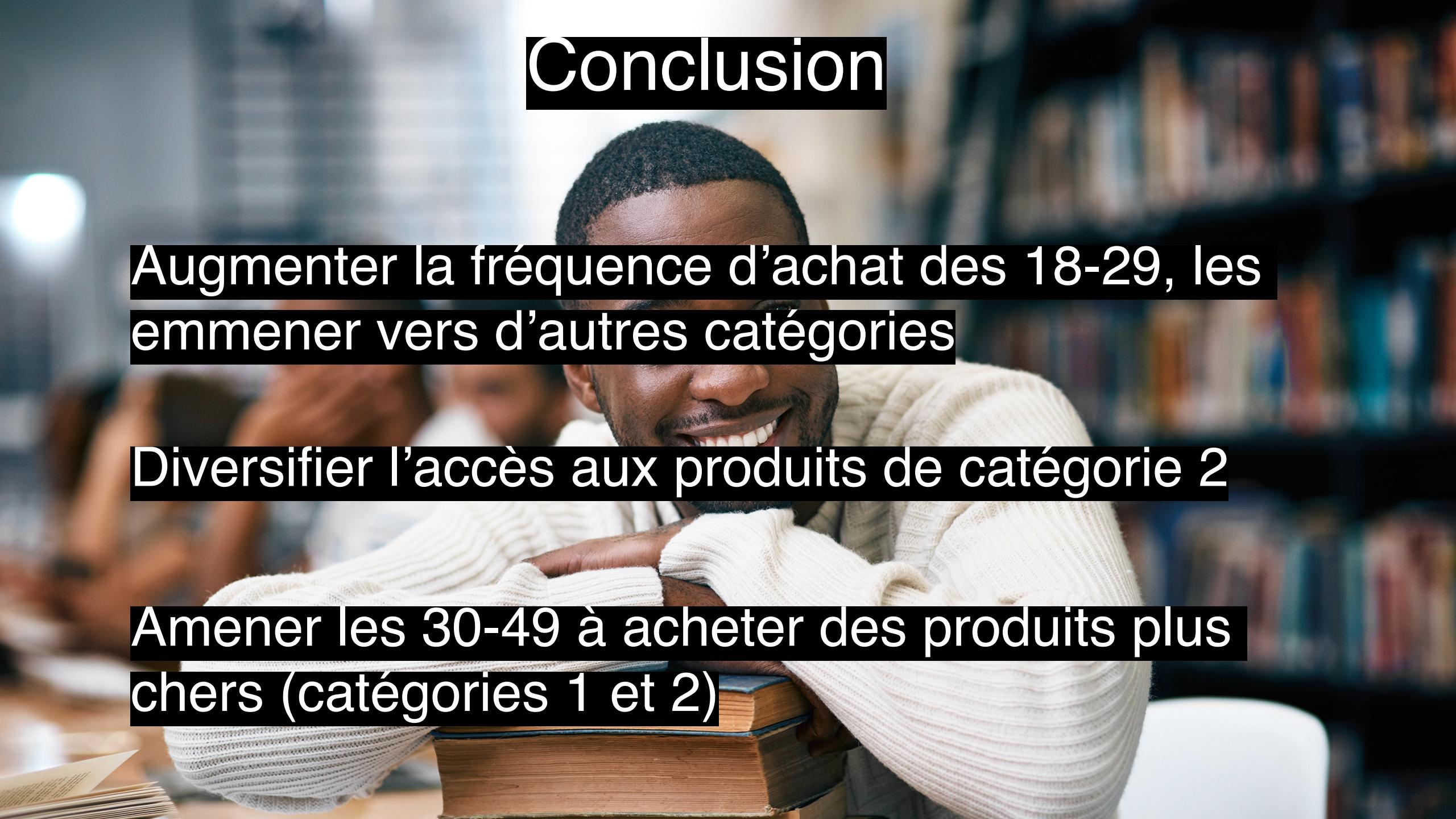
corrélation âge / catégorie de livre



test non paramétrique
Kruskal-Wallis

R^2
0.116
p-value
0.0

Conclusion

A close-up photograph of a young Black man with short hair, smiling warmly at the camera. He is wearing a light-colored, ribbed sweater. His hands are clasped around the pages of a thick, dark book. The background is blurred, showing shelves filled with books in a library or study room.

Augmenter la fréquence d'achat des 18-29, les emmener vers d'autres catégories

Diversifier l'accès aux produits de catégorie 2

Amener les 30-49 à acheter des produits plus chers (catégories 1 et 2)

A close-up photograph of a person's hand raised, palm facing forward, against a dark green chalkboard background. Several other blurred hands are visible in the background, suggesting a classroom environment where students are asking questions.

Des questions ?