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import pandas as pd
from mlxtend.frequent_patterns import apriori, association_rules

# Sample data as a list of transactions
data = {'Milk': [1, 0, 1, 1, 0],
        'Bread': [1, 1, 1, 1, 1],
        'Butter': [1, 1, 0, 0, 1],
        'Cheese': [0, 1, 1, 0, 0]}

# Create a DataFrame
df = pd.DataFrame(data)

# Step 1: Apply Apriori Algorithm to find frequent itemsets
frequent_itemsets = apriori(df, min_support=0.6, use_colnames=True)

# Step 2: Generate association rules
rules = association_rules(frequent_itemsets, metric="confidence", min_threshold=0.7)

print(frequent_itemsets)
print(rules[['antecedents', 'consequents', 'support', 'confidence', 'lift']])

```

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↔
  support      itemsets
0      0.6      (Milk)
1      1.0      (Bread)
2      0.6      (Butter)
3      0.6  (Milk, Bread)
4      0.6  (Butter, Bread)
antecedents consequents support confidence lift
0      (Milk)      (Bread)      0.6      1.0  1.0
1      (Butter)      (Bread)      0.6      1.0  1.0
/usr/local/lib/python3.10/dist-packages/ipykernel/ipkernel.py:283: DeprecationWarning: `should_run_async` will not call `transform_cell`
and should_run_async(code)
/usr/local/lib/python3.10/dist-packages/mlxtend/frequent_patterns/fpcommon.py:109: DeprecationWarning: DataFrames with non-bool types re
warnings.warn(

```