Retrieval

All category names

Diary Food - Frozen - Ice Cream
Sea Food - Fish – Sardine
...

Offline cached

BERT → Pooling → Similarity Engine → Candidates

Vector-based

BERT → Pooling

Product title
Red Wine Flavor Ice Cream

Rule-based

Meta Label Tagging

Ice Cream
Wine

Mapping → Candidates

Meta label set

Fish
Ice Cream
...

Reranking

Red Wine Flavor Ice Cream

Positive → Vanilla Ice Cream

Negative → Mixed dozen red wine

Contrastive Learning

Fusion

Candidates → BERT → Similarity Scores

Ranking

1. Diary Food - Frozen - Ice Cream
2. Alcoholic Drinks – Wine – Red Wine
3. Diary Food – Other – Butter