Step 1: Field Categorization

USEFUL: Customer Feedback Score, Return Reason, Seller, Batch Number, Packaging Color, Storage Temperature

NOISE: Order ID, Delivery Date, Warehouse

UNSURE: Inspector ID, Shipping Mode

Step 2: Explanation why it is useful field

Customer Feedback Score: Customers often report when products don't work as expected, taste different, or have suspicious packaging

Return Reason: Direct customer complaints about product authenticity

### Seller Information: Counterfeit products often come from unauthorized sellers

Batch Number: Authentic products have consistent, traceable batch numbering systems

Packaging Color: Counterfeit products often have slight color variations due to different printing processes

Storage Temperature: Improper storage can harm supplements, making them ineffective, most supplements require "Cool" or "Ambient" storage

## Step 3: IF-THEN Statements

## Main Detection Rules:

1. IF Customer rating is less than 2.0 THEN mark as "HIGH RISK" - needs to be checked
2. IF Customer complaints mention words like "suspicious", "fake", "different", or "doesn't work" THEN mark as "MIGHT BE FAKE"
3. IF Seller is not on the approved seller list THEN mark as "BAD SELLER"

## Extra Detection Rules:

1. IF Batch number looks wrong or is used twice THEN mark as "BATCH PROBLEM"
2. IF Package color is different from what it should be THEN mark as "WRONG PACKAGING"
3. IF Product wasn't stored at the right temperature THEN mark as "STORAGE PROBLEM"

## Combined Detection Rules:

1. IF Customer rating is less than 3.0 AND customers complain about quality THEN mark as "NEEDS INVESTIGATION"
2. IF Seller is not approved AND customers give low ratings THEN mark as "VERY RISKY"
3. IF Same product has 3 or more problems THEN mark as "FAKE PRODUCT RING"

## Why These Rules Work:

* Customer ratings - People usually give bad reviews when products don't work right
* Customer complaints - When people say something looks or tastes weird, it probably is
* Bad sellers - Fake products often come from sellers Amazon doesn't know well
* Batch numbers - Real companies use proper numbering systems, fakes don't
* Wrong colors - Fake products often look slightly different than real ones
* Storage issues - If supplements get too hot or cold, they stop working properly

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