

CLAIMS:

1. A computerized system for packaging optimization, comprising:
  - at least one processor; and
  - at least one non-transitory storage medium comprising instructions that, when executed by the at least one processor, cause the at least one processor to perform steps comprising:
    - receive historical order data associated with a fulfillment center, the order data including at least one of items ordered, package information, shipping costs, or fill rate;
    - generate a forecast for order data based on the historical order data and performance data associated with the fulfillment center, the forecast comprising a plurality of dummy orders, wherein the forecast data is determined based on a machine learning model;
    - receive preferences for packaging cost reduction;
    - determine a current packaging configuration associated with the fulfillment center;
    - optimize the current packaging configuration to generate at least one new packaging configuration using the received preferences and the generated forecast;
    - and
    - send the at least one new packaging configuration to a remote system.
2. The system of claim 1, wherein the preferences comprise at least one of:
  - a type of packaging,
  - a size of packaging, or
  - a proportion of packaging.
3. The system of claim 1, wherein generating a forecast further comprises generating the forecast based on the historical order data.

4. The system of claim 1, wherein optimizing the current packaging configuration further comprises:
  - optimizing the packaging configuration over at least one of packaging cost or packaging fill rate, wherein:
    - packaging cost comprises at least one of storage cost, shipping cost, or purchase cost.
5. The system of claim 4, wherein optimizing the current packaging configuration further comprises iteratively modifying a plurality of package sizes and a number of each of the plurality of package sizes to maximize fill rate.
6. The system of claim 1, wherein each new packaging configuration comprises:
  - a plurality of package sizes;
  - a number of each of the plurality of package sizes; and
  - estimated fill rates for each package of each package size.
7. The system of claim 1, wherein sending the at least one new packaging configuration comprises:
  - receiving a plurality of new packaging configurations;
  - determining a best of the plurality of new packaging configurations; and
  - sending the best packaging configuration to the remote system.
8. The system of claim 7, wherein the remote system comprises a packaging ordering system.
9. The system of claim 1, wherein the packages comprise at least one of boxes, bags, or wrap.
10. A computer implemented method for automatic packaging acquisition, the method comprising:
  - receiving historical order data associated with a fulfillment center, the order data including at least one of items ordered, package information, shipping costs, or fill rate;

generating a forecast for order data based on the historical order data  
and performance data associated with the fulfillment center, the  
forecast comprising a plurality of dummy orders, wherein the  
forecast data is determined based on a machine learning model;  
receiving preferences for packaging cost reduction;  
determining a current packaging configuration associated with the  
fulfillment center;  
optimizing the current packaging configuration to generate at least one  
new packaging configuration using the received preferences and  
the generated forecast; and  
sending the at least one new packaging configuration to a remote  
system.

11. The computer implemented method of claim 10, wherein the preferences comprise at least one of:
  - a type of packaging,
  - a size of packaging, or
  - a proportion of packaging.
12. The computer implemented method of claim 10, wherein generating a forecast further comprises generating the forecast based on the historical order data.
13. The computer implemented method of claim 10, wherein optimizing the current packaging configuration further comprises:
  - optimizing the packaging configuration over at least one of packaging cost or packaging fill rate, wherein:
    - packaging cost comprises at least one of storage cost, shipping cost, or purchase cost.
14. The computer implemented method of claim 10, wherein optimizing the current packaging configuration further comprises iteratively modifying a plurality of package sizes and a number of each of the plurality of package sizes to maximize fill rate.

15. The computer implemented method of claim 10, wherein each new packaging configuration comprises:
  - a plurality of package sizes;
  - a number of each of the plurality of package sizes; and
  - estimated fill rates for each package of each package size.
16. The computer implemented method of claim 10, wherein sending the at least one new packaging configuration comprises:
  - receiving a plurality of new packaging configurations;
  - determining a best of the plurality of new packaging configurations; and
  - sending the best packaging configuration to the remote system.
17. The computer implemented method of claim 10, wherein the remote system comprises a packaging ordering system.
18. The computer implemented method of claim 10, wherein the packages comprise at least one of boxes, bags, or wrap.
19. A computerized system for packaging optimization, comprising:
  - at least one processor; and
  - at least one non-transitory storage medium comprising instructions that, when executed by the at least one processor, cause the at least one processor to perform steps comprising:
    - receive historical order data associated with a fulfillment center, the order data including at least one of items ordered, package information, shipping costs, or fill rate;
    - generate a forecast for order data based on the historical order data and performance data associated with the fulfillment center, the forecast comprising a plurality of dummy orders, wherein the forecast data is determined based on a machine learning model;

receive preferences for packaging cost reduction linked to one or more groups of orders;  
determine a current packaging configuration associated with the fulfillment center and the one or more groups of orders linked to the received preferences;  
optimize the current packaging configuration to generate at least one new packaging configuration using the received preferences and the generated forecast;  
and  
send the at least one new packaging configuration associated with one or more groups of orders to a remote system.

20. The system of claim 19, wherein receiving preferences for packaging cost reduction for one or more groups of orders further comprises:  
grouping orders over at least one of required type of package and shipment details, wherein:  
shipment details comprise at least one of speed of shipment delivery and distance of shipment delivery.