

CLAIMS

What is claimed is:

1. A computerized system for delivery scheduling, 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:
 - receiving, from a remote system, an electronic request to order a product;
 - determining information associated with the remote system;
 - determining a fulfillment center associated with the information and the product;
 - generating, based on the information associated with the remote system, an electronic message comprising the determined fulfillment center, the product, a time of day, and a delivery wave estimate; and
 - forwarding, to the fulfillment center, the electronic message and instructions to generate a graphical user interface displaying the product and the delivery wave estimate.
2. The system of claim 1, wherein the information associated with the remote system comprises at least one of a username, a postal code, a physical location, or user preferences.

3. The system of claim 1, wherein the steps further comprise:
 - determining a region associated with the remote system information;
 - and
 - determining a fulfillment center from a set of fulfillment centers associated with the determined region.
4. The system of claim 1, wherein determining the fulfillment center comprises:
 - storing in a database a plurality of previous electronic requests and associated fulfillment centers;
 - dividing the previous electronic requests in a training dataset and a validation dataset, the training dataset having more requests than the validation dataset;
 - generating a predictive model based on the training data set associating request information and fulfillment centers;
 - validating the predictive model using the validation dataset; and
 - determining the fulfillment center by applying the predictive model to the electronic request.
5. The system of claim 4, wherein the predictive model comprises at least one of a linear regression, a random forest, or a logistic regression.
6. The system of claim 1, wherein the delivery wave estimate is generated based on a cutoff time.
7. The system of claim 6, wherein the delivery wave estimate comprises an estimate of a day and time period when the product will be delivered.

8. The system of claim 7, wherein the day and time period associated with a delivery wave estimate varies from fulfillment center to fulfillment center.
9. The system of claim 1, wherein the steps further comprise:
 - sending an instruction to the fulfillment center to print a shipping label listing the delivery wave estimate.
10. The system of claim 1, wherein
 - the electronic request comprises a request to order a second product,
 - the delivery wave estimate is a first delivery wave estimate; and
 - the steps further comprise:
 - determining a fulfillment center to fulfill the second product;
 - generating a second delivery wave estimate for delivery of the second product;
 - determining that the second delivery wave estimate is different from the first delivery wave; and
 - modifying at least one of the first or second delivery wave estimates to match the other delivery wave estimate.

11. A non-transitory computer-readable medium storing instructions that, when executed by a processor, perform operations for delivery scheduling comprising:
 - receiving, from a remote system, an electronic request to order a product;
 - determining information associated with the remote system;
 - determining a fulfillment center associated with the information and the product;
 - generating, based on the information associated with the remote system, an electronic message comprising the determined fulfillment center, the product, a time of day, and a delivery wave estimate; and
 - forwarding, to the fulfillment center, the electronic message and instructions to generate a graphical user interface displaying the product and the delivery wave estimate.
12. The medium of claim 11, wherein the information associated with the remote system comprises at least one of a username, a postal code, a physical location, or user preferences.
13. The medium of claim 11, wherein the operations further comprise:
 - determining a region associated with the remote system information;
 - and
 - determining a fulfillment center from a set of fulfillment centers associated with the determined region.
14. The medium of claim 11, wherein determining the fulfillment center comprises:

storing in a database a plurality of previous electronic requests and associated fulfillment centers;

dividing the previous electronic requests in a training dataset and a validation dataset, the training dataset having more requests than the validation dataset;

generating a predictive model based on the training data set associating request information and fulfillment centers;

validating the predictive model using the validation dataset; and

determining the fulfillment center by applying the predictive model to the electronic request.

15. The medium of claim 14, wherein the predictive model comprises at least one of a linear regression, a random forest, or a logistic regression.
16. The medium of claim 14, wherein the delivery wave estimate is generated based on a cutoff time.
17. The medium of claim 16, wherein the delivery wave estimate comprises an estimate of a day and time period when the product will be delivered.
18. The medium of claim 17, wherein the day and time period associated with a delivery wave estimate varies from fulfillment center to fulfillment center.
19. The medium of claim 11, wherein the operations further comprise:
 - sending an instruction to the fulfillment center to print a shipping label listing the delivery wave estimate.

20. A computer-implemented method for delivery scheduling, the method comprising:
- receiving, from a remote system, an electronic request to order a first product and a second product;
 - determining information associated with the remote system;
 - determining a first fulfillment center associated with the information and the first product and a second fulfillment center associated with the second product and the second fulfillment center;
 - generating a first delivery wave for the first product and a second delivery wave for the second product;
 - generating, based on the information associated with the remote system, an electronic message comprising the first and second fulfillment centers, the first and second products, a time of day, and the first and second delivery wave estimates;
 - determining that the second delivery wave estimate is different from the first delivery wave;
 - modifying at least one of the first or second delivery wave estimates to match the other delivery wave estimate;
 - forwarding, to the fulfillment center, the electronic message and instructions to generate a graphical user interface displaying a list with the first and second products color-coded with corresponding delivery wave estimate; and
 - sending an instruction to the fulfillment center to print shipping labels listing the first or second delivery wave estimates.