

ClaimsWhat is claimed is:

1. A computer-implemented system for correcting address information, the system comprising:
 - a memory storing instructions; and
 - at least one processor configured to execute the instructions to:
 - request an address for normalization from at least one of
 - a current address or a residential history of a user;
 - receive, from a user device, a user input including
 - requested address information responsive to the request for normalization;
 - search, based on the user input, a cache to determine
 - whether a refined version of the requested address is available;
 - return, based on a determination that a refined version of the requested address exists in the cache, a refined address as the normalized address to the user;
 - begin to transport a package to the user at the normalized address, by providing instructions to a mobile device associated with a delivery worker, to transport the package to the normalized address;
 - compare, while the package is in transit, the normalized address location to a current location of the delivery worker;
 - if it is determined that the normalized address location does not match the current location of the delivery worker:
 - transmit a warning to the user device;

correct the normalized address, based on a machine learning process;

store, based on the correction, the corrected normalized address in a database; and

provide instructions to deliver the package to the user at the delivery location based on the normalized address or the corrected normalized address.

2. The computer-implemented system of claim 1, wherein the at least one processor is further configured to execute the instructions to:

communicate, if it is determined that the normalized address location does match the current location of the delivery worker, a notification to the user that there exist no differences between the normalized address location and the current location of the delivery worker.

3. The computer-implemented system of claim 1, wherein the at least one processor is further configured to execute the instructions to:

communicate, if it is determined that an amount of detected differences between the normalized address location and the current location of the delivery worker exceeds a predetermined threshold, a notification to the user that the normalized address location does not match the current location of the delivery worker.

4. The computer-implemented system of claim 1, wherein the at least one processor is further configured to execute the instructions to:

receive the user input including requested address information from the user from at least one of a web browser, a mobile device, or a user database.

5. The computer-implemented system of claim 1, wherein the location of the delivery worker includes at least one of stored location data, stored map data, region, neighborhood divisions, or a residence title.
6. The computer-implemented system of claim 1, wherein the at least one processor is further configured to execute the instructions to:
 - compare, while the package is in transit, the normalized address location to address information stored in a database, wherein the database includes a dictionary of address terms.
7. The computer-implemented system of claim 6, wherein the at least one processor is further configured to execute the instructions to:
 - correct, if it is determined that the normalized address location does not match address information stored in the database, the normalized address.
8. The computer-implemented system of claim 7, wherein the at least one processor is further configured to execute the instructions to:
 - provide additional instructions to deliver the package to the user at the delivery location based on the corrected normalized address if it is determined that the normalized address location does match address information stored in the database.
9. The computer-implemented system of claim 1, wherein the at least one processor is further configured to execute the instructions to:
 - develop, based on a determination of multiple differences between the normalized address and the current location of the delivery worker, a corrective pattern to correct future user input that includes address information.

10. The computer-implemented system of claim 3, wherein the predetermined threshold includes a predetermined number of differences between the normalized address location and the current location of the delivery worker, and wherein the differences include at least one of differences in numbers, street names, zip codes, city names, and district names.
11. The computer-implemented system of claim 3, wherein the at least one processor is further configured to execute the instructions to:
 - generate, by the processor, a learning curve based on the corrected normalized address information,
 - develop, based on the determination of common differences, a corrective pattern; and
 - modify, based on the generation of a learning curve and the corrective pattern, the predetermined threshold for correcting inputted address information.
12. A computer-implemented method for correcting address information, the method comprising:
 - requesting an address for normalization from at least one of a current address or a residential history of a user;
 - receiving, from a user device, a user input including requested address information responsive to the request for normalization;
 - searching, based on the user input, a cache to determine whether a refined version of the requested address is available;
 - returning, based on a determination that a refined version of the requested address exists in the cache, a refined address as the normalized address to the user;
 - beginning to transport a package to the user at the normalized address, by providing instructions to a mobile device associated

with a delivery worker, to transport the package to the normalized address;

comparing, while the package is in transit, the normalized address location to a current location of the delivery worker;

if it is determined that the normalized address location does not match the current location of the delivery worker:

transmitting a warning to the user device;

correcting the normalized address, based on a machine learning process;

storing, based on the correction, the corrected normalized address in a database; and

providing instructions to deliver the package to the user at the delivery location based on the normalized address or the corrected normalized address.

13. The computer-implemented method of claim 12, the method comprising:

communicating, if it is determined that the normalized address location does match the current location of the delivery worker, a notification to the user that there exist no differences between the normalized address location and the current location of the delivery worker.
14. The computer-implemented method of claim 12, the method comprising:

communicating, if it is determined that an amount of detected differences between the normalized address location and the current location of the delivery worker exceeds a predetermined threshold, a notification to the user that the normalized address location does not match the current location of the delivery worker.

15. The computer-implemented method of claim 12, the method comprising:
receiving the user input including requested address information from the user from at least one of a web browser, a mobile device, or a user database.
16. The computer-implemented method of claim 12, wherein the location of the delivery worker includes at least one of stored location data, stored map data, region, neighborhood divisions, or a residence title.
17. The computer-implemented method of claim 12, the method comprising:
comparing, while the package is in transit, the normalized address location to address information stored in a database, wherein the database includes a dictionary of address terms.
18. The computer-implemented method of claim 17, the method comprising:
correcting, if it is determined that the normalized address location does not match address information stored in the database, the normalized address.
19. The computer-implemented method of claim 18, the method comprising:
provide additional instructions to deliver the package to the user at the delivery location based on the corrected normalized address if it is determined that the normalized address location does match address information stored in the database.
20. A non-transitory computer readable medium comprising executable instructions that when executed by at least one processing device cause the at least one processing device to correct address information and perform operations comprising:

requesting an address for normalization from at least one of a current address or a residential history of a user;

receiving, from a user device, a user input including requested address information responsive to the request for normalization;

searching, based on the user input, a cache to determine whether a refined version of the requested address is available;

returning, based on a determination that a refined version of the requested address exists in the cache, a refined address as the normalized address to the user;

beginning to transport a package to the user at the normalized address, by providing instructions to a mobile device associated with a delivery worker, to transport the package to the normalized address;

comparing, while the package is in transit, the normalized address location to a current location of the delivery worker;

if it is determined that the normalized address location does not match the current location of the delivery worker:

transmitting a warning to the user device;

correcting the normalized address, based on a machine learning process;

storing, based on the correction, the corrected normalized address in a database; and

providing instructions to deliver the package to the user at the delivery location based on the normalized address or the corrected normalized address.