CLAIMS

1. A computer-implemented method for increasing productivity of classification and sorting one or more addresses, the computer-implemented method comprising:

logically partitioning, at an address classification and sorting system executed by a processor, a geographical region into one or more logical zones in real-time, wherein the one or more logical zones are one or more sub-regions of the geographical region, wherein the logical partitioning of the geographical region is done based on one or more pre-defined points of interests, and based on one or more parameters, comprising: population density, a number of one or more addresses, business interests from the one or more addresses and nearby connectivity to the one or more addresses, wherein the one or more logical zones dynamically adapts the one or more geometrical shapes and sizes based on the one or more parameters;

single scanning an image to recognize, by optical character recognition, character-by-character text of address data in a short amount of time;

analyzing the scanned image, by training the address classification and sorting system on previously extracted and segmented unstructured address data using hardware-run machine learning algorithms;

translating the scanned image into character codes;

real-time fetching, using hardware-run text-processing algorithms at the address classification and sorting system the address data from an entity of the one or more entities containing a destination address, wherein the address data is fetched from the entity of the one or more entities using one or more input devices;

extracting, at the address classification and sorting system, one or more points of interests from the fetched address data based on hardware-run machine learning algorithms, wherein the one or more points of interests are extracted from the address data based on one or more languages, wherein the extraction is done to determine a zone of the one or more logical zones associated with the one or more entities; wherein the one or more points of interests are segmented into one or more localities and sub-localities, wherein the segmentation is done according to:

address cleaning of non-essential special characters and punctuation marks from the address data,

spell-checking misspelled words in the address data,

spell-suggesting correct words for replacing the misspelled words based on past learning and training by the address classification and sorting system for similar geography and similar addresses according to one or more languages,

address tagging, and

micro-classification;

generating, at the address classification and sorting system, a signal by a signal generator circuitry embedded inside a computing device hosting the address classification and sorting system, wherein the signal is generated for determining the zone of the one or more logical zones associated with the entity of the one or more entities, wherein the determination is done based on mapping of the one or more pre-defined points of interests with the extracted one or more points of interests, to sort the entity of the one or more entities into the zone of the one or more logical zones, wherein the zone of the one or more logical zones is determined based on a confidence level is calculated based on the one or more parameters in real-time, to predict unforeseen address data with a higher level of accuracy, wherein the confidence level is updated for each zone of the one or more logical zones in real-time, wherein the updating of the confidence level is dynamic and adaptive;

logically updating, at the address classification and sorting system with the processor, the one or more logical zones based on the extracted one or more points of interests in real-time, wherein the updating is done for the newly fetched address data, based on the one or more parameters to speed up processing and reducing dependency on resources during sorting of the one or more entities;

changing one or more geometrical shapes after the updating of each zone of the one or more logical zones;

sorting, by the address classification and sorting system, the one or more entities into the one or more compartments using geocode co-ordinates of delivery addresses for the one or more entities; and

wherein the geographical region is physical area that comprises the one or more facility, and is logically partitioned into the one or more logical zones by the address classification and sorting system, wherein the one or more logical zones are virtual zones dynamically and adaptively created and updated real-time.

2. The computer-implemented method of claim 1, wherein the hardware-run text processing algorithms comprising optical character recognition algorithms and natural language processing algorithms, wherein the hardware-run machine learning algorithms comprising graph-based machine learning algorithms, prediction algorithms and phonetic distance based fuzzy search algorithms.

3. A computer system comprising:

one or more processors;

a signal generator circuitry embedded inside a computing device for generating a signal; and

a memory coupled to the one or more processors, the memory for storing instructions which, when executed by the one or more processors, cause the one or more processors to perform a computer implemented method for increasing productivity of classification and sorting the one or more addresses, the computer implemented method comprising:

logically partitioning, at an address classification and sorting system, a geographical region into one or more logical zones in real-time, wherein the one or more logical zones are one or more sub-regions of the geographical region, wherein the logical partitioning of the geographical region is done based on one or more pre-defined points of interests, based on one or more parameters, comprising: population density, a number of one or more addresses, business interests from the one or more addresses and nearby connectivity to the one or more addresses, wherein the one or more logical zones dynamically adapts to one or more geometrical shapes and sizes based on the one or more parameters;

single scanning an image to recognize, by optical character recognition, character-by-character text of address data in a short amount of time;

analyzing the scanned image, by training the address classification and sorting system on previously extracted and segmented unstructured address data using hardware-run machine learning algorithms;

translating the scanned image into character codes;

real-time fetching, using the hardware-run text-processing algorithms at the address classification and sorting system, the address data from an entity of the one or more entities containing destination address, wherein the address data is fetched from the entity of the one or more entities using one or more input devices;

extracting, at the address classification and sorting system, one or more points of interests from the fetched address data based on hardware-run machine learning algorithms, wherein the one or more points of interests are extracted from the address data based on one or more languages, wherein the extraction is done to determine a particular zone of the one or more logical zones associated with the address of the one or more entities, wherein the one or more points of interests are segmented into one or more localities and sub-localities, wherein the segmentation is according to:

address cleaning of non-essential special characters and punctuation marks from the address data,

spell-checking misspelled words in the address data,

spell-suggesting correct words for replacing the misspelled words based on past learning and training by the address classification and sorting system for similar geography and similar addresses according to one or more languages,

address tagging, and

micro-classification;

generating, at the address classification and sorting system, a signal by a signal generator circuitry embedded inside the computing device hosting the address classification and sorting system, wherein the signal is generated for determining the zone of the one or more logical zones associated with the entity of the one or more entities, wherein the determination is done based on mapping of the one or more pre-defined points of interests with the extracted one or more points of interests to sort the entity of the one or more entities into the zone of the one or more logical zones, wherein the zone of the one or more logical zones is determined based on a confidence level calculated based on the one or more parameters in real-time, to predict unforeseen address data with higher level of accuracy, wherein the confidence level is updated for each zone of the one or more logical zones in real-time, wherein the updating of the confidence level is dynamic and adaptive in nature;

logically updating, at the address classification and sorting system, the one or more logical zones based on the extracted one or more points of interests in real-time, wherein the updating is done for the newly fetched address data based on the one or more parameters to speed up processing and reducing dependency on resources during sorting of the one or more entities;

changing one or more geometrical shapes after the updating of each zone of the one or more logical zones;

sorting, by the address classification and sorting system, the one or more entities into the one or more compartments using geocode co-ordinates of delivery addresses for the one or more entities; and

wherein the geographical region is physical area that comprises the one or more facility, and is logically partitioned into the one or more logical zones by the address classification and sorting system, wherein the one or more logical zones are virtual zones dynamically and adaptively created and updated in real-time.

4. A non-transitory computer-readable medium having instructions that, in response to execution of the instructions by one or more processors, cause the one or more processors to perform a computer implemented method for increasing productivity of classification and sorting one or more addresses, the computer implemented method comprising:

logically partitioning, at an address classification and sorting system, a geographical region into one or more logical zones in real-time, wherein the one or more logical zones are one or more sub-regions of the geographical region, wherein the logical partitioning of the geographical region is done based on one or more pre-defined points of interests, based on one or more parameters, comprising: population density, a number of one or more addresses, business interests from the one or more addresses and nearby connectivity to the one or more addresses, wherein the one or more logical zones dynamically adapts to one or more geometrical shapes and sizes based on the one or more parameters;

single scanning an image to recognize, by optical character recognition, character-by-character text of address data in a short amount of time;

analyzing the scanned image, by training the address classification and sorting system on previously extracted and segmented unstructured address data using hardware-run machine learning algorithms;

translating the scanned image into character codes;

real-time fetching, using hardware-run text-processing algorithms at the address classification and sorting system, the address data from an entity of the one or more entities containing destination address, wherein the address data is fetched from the entity of the one or more entities using one or more input devices;

extracting, at the address classification and sorting system, one or more points of interests from the fetched address data based on hardware-run machine learning algorithms, wherein the one or more points of interests are extracted from the address data based on one or more languages, wherein the extraction is done to determine a particular zone of the one or more logical zones associated with the address of the one or more entities, wherein the one or more points of interests are segmented into one or more localities and sub-localities, wherein the segmentation is according to:

address cleaning of non-essential special characters and punctuation marks from the address data,

spell-checking misspelled words in the address data,

spell-suggesting correct words for replacing the misspelled words based on past learning and training by the address classification and sorting system for similar geography and similar addresses according to one or more languages,

address tagging, and

micro-classification;

generating, at the address classification and sorting system, a signal by a signal generator circuitry embedded inside the computing device hosting the address classification and sorting system, wherein the signal is generated for determining the zone of the one or more logical zones associated with the entity of the one or more entities, wherein the determination is done based on mapping of the one or more pre-defined points of interests with the extracted one or more points of interests to sort the entity of the one or more entities into the zone of the one or more logical zones, wherein the zone of the one or more logical zones is determined based on a confidence level calculated based on the one or more parameters in real-time, to predict unforeseen address data with higher level of accuracy, wherein the confidence level is updated for each zone of the one or more logical zones in real-time, wherein the updating of the confidence level is dynamic and adaptive in nature;

logically updating, at the address classification and sorting system, the one or more logical zones based on the extracted one or more points of interests in real-time, wherein the updating is done for the newly fetched address data based on the one or more parameters to speed up processing and reducing dependency on resources during sorting of the one or more entities;

changing one or more geometrical shapes after the updating of each zone of the one or more logical zones;

sorting, by the address classification and sorting system, the one or more entities into the one or more compartments using geocode co-ordinates of delivery addresses for the one or more entities; and

wherein the geographical region is physical area that comprises the one or more facility, and is logically partitioned into the one or more logical zones by the address classification and sorting system, wherein the one or more logical zones are virtual zones dynamically and adaptively created and updated in real-time.