WHAT IS CLAIMED IS:

1. A computerized-system for analyzing electrocardiogram (ECG) data of a patient, the ECG data generated by one or more electrodes across a plurality of time points and comprising a plurality of beats, the computerized-system configured to:

analyze the ECG data using a delineation algorithm to generate wave information corresponding to a likelihood of a presence of at least one wave at the plurality of time points;

determine beat onset information and beat offset information for beats of the plurality of beats where at least one wave is determined to be present to generate a plurality of beat onsets and beat offsets;

extract a plurality of beat portions of ECG data based on the plurality of beat onsets and beat offsets, each beat portion of the plurality of beat portions of ECG data corresponding to a beat of the plurality of beats;

determine that at least two beats of the plurality of beats should be grouped together based on the plurality of beat portions of ECG data, the at least two beats forming a cluster;

analyze the plurality of portions of ECG data using an embedding algorithm to generate embedding data representative of the plurality of beats; and

analyze the embedding data using a grouping algorithm to generate group data, wherein the at least two beats of the plurality of beats are determined to be grouped together based on the group data.

2. The computerized-system of claim 1, wherein group data corresponds to a distance between two beats.

3. The computerized-system of claim 1, wherein the delineation algorithm utilizes a first neural network and the embedding algorithm utilizes a second neural network.

4. The computerized-system of claim 3, wherein the grouping algorithm utilizes a third neural network.

5. The computerized-system of claim 1, wherein the computerized-system is further configured to receive user input data from an input device regarding an inaccuracy corresponding to the ECG data, and

wherein the computerized-system is further configured to adjust one or more of the delineation algorithm, embedding algorithm, or grouping algorithm based on the user input data.

6. The computerized-system of claim 5, wherein the computerized-system is further configured to modify displayed data based on the user input data, and

wherein the user input data corresponds to adding, deleting, or splitting one or more QRS clusters, PVC clusters, or PAC clusters.

7. The computerized-system of claim 5, wherein the embedding data comprises a vector of data for each beat of the plurality of beats.

8. The computerized-system of claim 1, wherein determining that at least two beats of the plurality of beats should be grouped together further comprises determining that the group data satisfies a threshold value.

9. The computerized-system of claim 1, wherein the computerized-system is further configured to transmit information indicative of the cluster to a computer for display on a graphic user interface, and

wherein the computerized-system is further configured to generate information to display at least one overlay comprising at least two beats of the plurality of beats overlaid over one another.

10. The computerized-system of claim 1, wherein the computerized-system is further configured to analyze the beats in the cluster using a classification algorithm to determine a likelihood of a presence of the one or more abnormalities, conditions, or descriptors associated with cardiac events for the patient.

11. The computerized-system of claim 1, wherein the computerized-system is further configured to analyze the wave information from the delineation algorithm using a classification algorithm to determine a likelihood of a presence of the one or more abnormalities, conditions, or descriptors associated with cardiac events for the patient.

12. The computerized-system of claim 11, wherein the wave information is inputted into the classification algorithm and separately used to determine that at least two beats of the plurality of beats should be grouped together.

13. The computerized-system of claim 1, wherein the computerized-system is further configured to, prior to analyzing the ECG data using the delineation algorithm, pre-process the ECG data to remove noise from the ECG data.

14. The computerized system of claim 1, wherein the computerized-system is further configured to assign the ECG data and information based on the ECG data to a user account for review, and

wherein the computerized-system is further configured to receive user input data regarding the ECG data and information based on the ECG data from the user account based on the review.

15. A method for analyzing electrocardiogram (ECG) data of a patient, the ECG data generated by one or more electrodes across a plurality of time points and comprising a plurality of beats, the method comprising:

analyzing the ECG data using a delineation algorithm to generate wave information corresponding to a likelihood of a presence of at least one wave at the plurality of time points;

determining beat onset information and beat offset information for beats of the plurality of beats where at least one wave is determined to be present to generate a plurality of beat onsets and beat offsets;

extracting a plurality of beat portions of ECG data based on the plurality of beat onsets and beat offsets, each beat portion of the plurality of beat portions of ECG data corresponding to a beat of the plurality of beats;

determining that at least two beats of the plurality of beats should be grouped together based on the plurality of beat portions of ECG data, the at least two beats forming a cluster;

analyzing the plurality of portions of ECG data using an embedding algorithm to generate embedding data representative of the plurality of beats; and

analyzing the embedding data using a grouping algorithm to generate group data, wherein the at least two beats of the plurality of beats are determined to be grouped together based on the group data.