What is claimed is:

1. A computer-implemented method for generating a dental treatment plan of a patient comprising the steps of:

receiving patient data comprising a dental image of the patient;

analysing the dental image of the patient using an AI model to generate AI predictions on tooth detection, numbering and dental issues of the patient;

populating a dental chart based on the AI predictions and input comprising examination results of the patient received from one or more users;

generating a completed dental questionnaire using a clinical decision support system (CDSS) based upon the populated dental chart, patient data and input received from the one or more users;

generating a final treatment plan based on the completed dental questionnaire; and

displaying the final treatment plan to the one or more users.

2. The computer-implemented method of claim 1, wherein the AI predictions are~~is~~ based upon the following components:

bounding box x-min, y-min coordinates with a width and height;

a probability of an object being present in the bounding box; and

class probabilities of the object detected in the bounding box.

3. The computer-implemented method of claim 1, wherein the AI model comprises a first deep learning CNN, for detecting objects that are dynamic in size and a second deep learning CNN for identifying objects that are static in size.

4. The computer-implemented method of claim 3, wherein the first deep learning CNN comprise a CenterNet model for detecting objects that are dynamic in size and the second deep learning CNN comprise an EfficientDet model for identifying objects that are static in size.

5. The computer-implemented method of claim 1, wherein the CDSS is a rule-based or knowledge-based CDSS.

6. The computer-implemented method of claim 5, wherein the rule-based CDSS comprises a framework in the form of a directed graph.

7. The ~~system~~computer-implemented method of claim 5~~1~~8, wherein the knowledge-based CDSS comprises a framework in the form of a graph rule coded to ~~the~~a software, focusing on creating a knowledge description language, for making diagnostic inferences.

8. A computer system comprising a processor configured to perform the method of any one of claims 1 to 7.

9. A computer program comprising instructions which, when the program is executed by a computer, cause the computer to carry out the method of any one of claims 1 to 7.

10. A computer-readable storage medium comprising instructions which, when the ~~program is~~ instructions are executed by a computer, cause the computer to carry out the method of any one of claims 1 to 7.

11. A system for generating a dental treatment plan of a patient comprising:

an input unit for receiving patient data comprising a dental image;

a computer-readable storage medium configured to store instructions defining an AI model;

a first server to execute a clinical decision support system (CDSS);

a second server to execute the instructions defining the AI model,

wherein the second server is configured to perform operations comprising:

generate AI predictions on tooth detection, numbering and dental issues of the patient, based upon the dental image using the AI model; and

populate a dental chart based on the AI predictions and input comprising examination results of the patient received from one or more users,

wherein the first server is configured to perform operations comprising:

generate a completed dental questionnaire based upon the dental chart and input received from one or more users using the CDSS; and

generate a final treatment plan based on the completed dental questionnaire using the CDSS;~~:~~ and

an output unit configured to communicate the dental chart, questionnaire and final treatment plan to the user.

12. The system of claim 11~~1~~, wherein the AI model combines image recognition and localisation for object detection of an input dental image to detect and identify teeth locality for numbering and classification of the teeth relating to dental issues.

13. The system of claim 12, wherein the locality of teeth and tooth numbering is determined by forming of bounding boxes around teeth.

14. The system of claim 13, wherein the AI predictions are~~is~~ based upon the following components:

bounding box x-min, y-min coordinates and ~~the~~a width and height;

~~the~~a probability of an object being present in the bounding box; and

~~the~~ class probabilities of the object detected in the bounding box.

15. The system of claim 14, wherein the bounding box~~es~~ defines a boundary for each tooth captured in the dental image and assigns a number to each detected tooth.

16. The system of claim 11, wherein the AI model comprises a first deep learning CNN, for detecting objects that are dynamic in size and a second deep learning CNN for identifying objects that are static in size.

17. The system of claim 16, wherein the first deep learning CNN comprise a CenterNet model for detecting objects that are dynamic in size and the second deep learning CNN comprise an EfficientDet model for identifying objects that are static in size.

18. The system of claim 11, wherein the CDSS is a rule-based or knowledge-based CDSS.

19. The system of claim 18, wherein the rule-based CDSS comprises a framework in the form of a directed graph.

20. The system of claim 18, wherein the knowledge-based CDSS comprises a framework in the form of a graph rule coded to ~~thea~~ software, focusing on creating a knowledge description language, for making diagnostic inferences.