CLAIMS

What is claimed is:

~~1. A system, comprising:~~

~~a memory that stores computer executable components;~~

~~a processor, operably coupled to the memory, and that executes computer executable components stored in the memory, wherein the computer executable components comprise:~~

~~a grid component that generates a digital grid and visual layer overlay on a raw video feed from borescope inspections;~~

~~a selection component that analyzes the video feed and identifies frames that capture information of part damage and defects; and~~

~~a machine learning component that classifies type of part defect, determines location of defect and learns the digital grid.~~

~~2. The system of claim 1, further comprising a modeling component that generates a model by employing the classification of the type of part defect, the location of the defect and the learned digital grid.~~

~~3. The system of claim 1, wherein the classification of the type of part defect and the location of the defect is improved by considering engine history and operational characteristics.~~

~~4. The system of claim 1, wherein the grid component generates the digital grid based on a rule set by analyzing past videos or based on the learned digital grid.~~

~~5. The system of claim 1, wherein the digital grid enables standardized images to be taken and removes variation in image capture to improve image processing.~~

~~6. The system of claim 1, wherein the classification of the type of part defect and the location of the defect are displayed as an augmented reality layer on the raw video feed.~~

7. The system of claim 1, wherein an online mode overlaps the augmented reality layer on the raw video feed.

8. The system of claim 1, wherein an offline mode analyzes stored borescope inspection videos to continuously improve frame selection and defect identification.

9. The system of claim 1, wherein the machine learning component generates a condensed version of the augmented reality layer overlapping the raw video feed containing the classification of the type of part defect, the location of the defect, the engine history and the operational characteristics.

10. The system of claim 1, further comprising a maintenance component that generates an alert of maintenance based on the classification of the type of part defect.

11. The system of claim 1, further comprising a diagnostic component that employs real-time data including the classification of the type of part defect, the location of the defect, the engine history and the operational characteristics to generate a diagnosis of cause of the type of part defect.

12. The system of claim 1, wherein the raw video feed is received from a robot or a drone.

13. A computer-implemented method, comprising:

generating, by a system operatively coupled to a processor, a digital grid and visual layer overlay on a raw video feed from borescope inspections;

analyzing, by the system, the video feed and identifying frames that capture information of part damage and defects; and

classifying, by the system, type of part defect, determining location of defect and learning the digital grid.

14. The computer-implemented method of claim 13, further comprising generating a model by employing the classification of the type of part defect, the location of the defect and the learned digital grid.

15. The computer-implemented method of claim 13, further comprising generating an alert of maintenance based on the classification of the type of part defect.

16. The computer-implemented method of claim 13, further comprising employing real-time data including the classification of the type of part defect, the location of the defect, the engine history and the operational characteristics to generate a diagnosis of cause of the type of part defect.

17. A computer program product for facilitating aviation engine inspection, the computer program product comprising a computer readable storage medium having program instructions embodied therewith, the program instructions executable by a processor to cause the processor to:

generate a digital grid and visual layer overlay on a raw video feed from borescope inspections;

analyze the video feed and identify frames that capture information of part damage and defects; and

classify type of part defect, determine location of defect and learn the digital grid.

18. The computer program product of claim 17, wherein the program instructions are further executable to cause the processor to:

generate a model by employing the classification of the type of part defect, the location of the defect and the learned digital grid.

19. The computer program product of claim 17, wherein the program instructions are further executable to cause the processor to:

generate an alert of maintenance based on the classification of the type of part defect.

20. The computer program product of claim 17, wherein the program instructions are further executable to cause the processor to:

employ real-time data including the classification of the type of part defect, the location of the defect, the engine history and the operational characteristics to generate a diagnosis of cause of the type of part defect.

1. A system, comprising:

a memory that stores computer executable components;

a processor, operably coupled to the memory, and that executes computer executable components stored in the memory, wherein the computer executable components comprise:

a grid component that generates a digital grid and visual layer overlay on a raw video feed from borescope inspections, wherein the grid component locks the digital grid to an engine part depicted in the raw video feed at a predefined viewing angle and predefined zoom level when the digital grid aligns with the engine part;

a selection component that analyzes the video feed and identifies frames that capture information of part damage and defects; and

a machine learning component that classifies type of part defect, determines location of defect and learns the digital grid.

2. The system of claim 1, further comprising a modeling component that generates a model by employing the classification of the type of part defect, the location of the defect and the learned digital grid.

3. The system of claim 1, wherein the classification of the type of part defect and the location of the defect is improved by considering engine history and operational characteristics.

4. The system of claim 1, wherein the grid component generates the digital grid based on a rule set by analyzing past videos or based on the learned digital grid.

5. The system of claim 1, wherein the locking of the digital grid enables standardized images to be taken and removes variation in image capture to improve image processing.

6. The system of claim 1, wherein the classification of the type of part defect and the location of the defect are displayed as an augmented reality layer on the raw video feed.

7. The system of claim 1, wherein an online mode overlaps the augmented reality layer on the raw video feed.

8. The system of claim 1, wherein an offline mode analyzes stored borescope inspection videos to continuously improve frame selection and defect identification.

9. The system of claim 1, wherein the machine learning component generates a condensed version of the augmented reality layer overlapping the raw video feed containing the classification of the type of part defect, the location of the defect, the engine history and the operational characteristics.

10. The system of claim 1, further comprising a maintenance component that generates an alert of maintenance based on the classification of the type of part defect.

11. The system of claim 1, further comprising a diagnostic component that employs real-time data including the classification of the type of part defect, the location of the defect, the engine history and the operational characteristics to generate a diagnosis of cause of the type of part defect.

12. The system of claim 1, wherein the raw video feed is received from a robot or a drone.

13. A computer-implemented method, comprising:

generating, by a system operatively coupled to a processor, a digital grid and visual layer overlay on a raw video feed from borescope inspections, wherein the digital grid locks to an engine part depicted in the raw video feed at a predefined viewing angle and predefined zoom level when the digital grid aligns with the engine part;

analyzing, by the system, the video feed and identifying frames that capture information of part damage and defects; and

classifying, by the system, type of part defect, determining location of defect and learning the digital grid.

14. The computer-implemented method of claim 13, further comprising generating a model by employing the classification of the type of part defect, the location of the defect and the learned digital grid.

15. The computer-implemented method of claim 13, further comprising generating an alert of maintenance based on the classification of the type of part defect.

16. The computer-implemented method of claim 13, further comprising employing real-time data including the classification of the type of part defect, the location of the defect, the engine history and the operational characteristics to generate a diagnosis of cause of the type of part defect.

17. A computer program product for facilitating aviation engine inspection, the computer program product comprising a non-transitory computer readable storage medium having program instructions embodied therewith, the program instructions executable by a processor to cause the processor to:

generate a digital grid and visual layer overlay on a raw video feed from borescope inspections, wherein the digital grid locks to an engine part depicted in the raw video feed at a predefined viewing angle and predefined zoom level when the digital grid aligns with the engine part;

analyze the video feed and identify frames that capture information of part damage and defects; and

classify type of part defect, determine location of defect and learn the digital grid.

18. The computer program product of claim 17, wherein the program instructions are further executable to cause the processor to:

generate a model by employing the classification of the type of part defect, the location of the defect and the learned digital grid.

19. The computer program product of claim 17, wherein the program instructions are further executable to cause the processor to:

generate an alert of maintenance based on the classification of the type of part defect.

20. The computer program product of claim 17, wherein the program instructions are further executable to cause the processor to:

employ real-time data including the classification of the type of part defect, the location of the defect, the engine history and the operational characteristics to generate a diagnosis of cause of the type of part defect.