CLAIMS

1. A computer-implemented method comprising:

receiving, by an analytics system from a mesh network comprising a plurality of assets at a remote location, respective operating data for each asset in the mesh network that is indicative of the operating conditions of the asset, wherein each asset is equipped with a respective set of sensors for monitoring the operating conditions of the asset;

for each asset in the mesh network, executing a respective predictive model that takes the respective operating data for the asset as inputs and outputs a respective likelihood value for the asset indicating a likelihood that the asset will become unavailable within a given period of time in the future;

while executing the respective predictive model for each asset in the mesh network, determining that the respective likelihood value for a given asset of the plurality of assets in the mesh network has met threshold criteria indicating that the given asset is likely to be unavailable within the given period of time in the future;

in response to the determining, communicating with the mesh network to cause a routing configuration for at least one other asset in the mesh network to be updated such that the given asset is removed from the routing configuration.

2. The computer-implemented method of claim 1,

wherein receiving the respective operating data for each asset in the mesh network comprises receiving respective sensor data for each asset in the mesh network;

wherein executing the respective predictive model for each asset in the mesh network comprises executing a health score model that takes the respective sensor data for the asset as inputs and outputs a respective health score for the asset indicating a likelihood that an operational failure will occur at the asset within the given period of time in the future; and

wherein determining that the respective likelihood value for the given asset has met threshold criteria indicating that the given asset is likely to be unavailable within the given period of time in the future comprises determining that the respective health score for the given asset has met threshold

criteria indicating that the given asset is likely to have an operational failure within the given period of time in the future.

3. The computer-implemented method of claim 2, wherein determining that the respective health score for the given asset has met the threshold criteria comprises determining that the respective health score for the given asset has exceeded a health score threshold value for a certain period of time.

4. The computer-implemented method of claim 1, wherein determining that the respective likelihood value for a given asset of the plurality of assets in the mesh network has met threshold criteria indicating that the given asset is likely to become unavailable within the given period of time in the future comprises determining that the respective likelihood value for a given asset of the plurality of assets in the mesh network has met threshold criteria indicating that the given asset is likely to become unavailable due to at least one of a failure at the given asset, the given asset going off-line, a scheduled down time for the given asset, or the given asset being unable to communicate over the mesh network.

5. The computer-implemented method of claim 1, wherein the plurality of assets comprises at least one of a transportation machine, an industrial machine, a medical machine, or a utility machine.

6 The computer-implemented method of claim 1, wherein communicating with the mesh network to cause the routing configuration for at least one other asset in the mesh network to be updated such that the given asset is removed from the routing configuration comprises:

transmitting an indication that the given asset is likely to become unavailable within the given period of time in the future to the mesh network and thereby causing the at least one other asset in the mesh network to remove the given asset from its routing configuration.

7. The computer-implemented method of claim 1, wherein communicating with the mesh network to cause the routing configuration for at least one other asset in the mesh network to be updated such that the given asset is removed from the routing configuration comprises:

updating the routing configuration for the at least one other asset in the mesh network by removing the given asset from the routing configuration; and

transmitting the updated routing configuration to the mesh network.

8. A non-transitory computer-readable medium having instructions stored thereon that are executable to cause a computing system to:

receive, from a mesh network comprising a plurality of assets at a remote location, respective operating data for each asset in the mesh network that is indicative of the operating conditions of the asset, wherein each asset is equipped with a respective set of sensors for monitoring the operating conditions of the asset;

for each asset in the mesh network, execute a respective predictive model that takes the respective operating data for the asset as inputs and outputs a respective likelihood value for the asset indicating a likelihood that the asset will become unavailable within a given period of time in the future;

while executing the respective predictive model for each asset in the mesh network, determine that the respective likelihood value for a given asset of the plurality of assets in the mesh network has met threshold criteria indicating that the given asset is likely to be unavailable within the given period of time in the future; and

in response to the determining, communicate with the mesh network to cause a routing configuration for at least one other asset in the mesh network to be updated such that the given asset is removed from the routing configuration.

9. The computer-readable medium of claim 8,

wherein receiving the respective operating data for each asset in the mesh network comprises receiving respective sensor data for each asset in the mesh network;

wherein executing a respective predictive model for each asset in the mesh network comprises executing a health score model that takes the respective sensor data for the asset as inputs and outputs a respective health score for the asset indicating a likelihood that an operational failure will occur at the asset within the given period of time in the future; and

wherein determining that the respective likelihood value for the given asset has met threshold criteria indicating that the given asset is likely to be unavailable within the given period of time in the future comprises determining that the respective health score for the given asset has met threshold criteria indicating that the given asset is likely to have an operational failure within the given period of time in the future.

10. The computer-readable medium of claim 9, wherein determining that the respective health score for the given asset has met the threshold criteria comprises determining that the respective health score for the given asset has exceeded a health score threshold value for a certain period of time.

11. The computer-readable medium of claim 8, wherein determining that the respective likelihood value for a given asset of the plurality of assets in the mesh network has met threshold criteria indicating that the given asset is likely to become unavailable within the given period of time in the future comprises determining that the respective likelihood value for a given asset of the plurality of assets in the mesh network has met threshold criteria indicating that the given asset is likely to become unavailable due to at least one of a failure at the given asset, the given asset going off-line, a scheduled down time for the given asset, or the given asset being unable to communicate over the mesh network.

12. The computer-readable medium of claim 8, wherein the plurality of assets comprises at least one of a transportation machine, an industrial machine, a medical machine, or a utility machine.

13. The computer-readable medium of claim 8, wherein communicating with the mesh network to cause the routing configuration for at least one other asset in the mesh network to be updated comprises:

transmitting an indication that the given asset is likely to become unavailable within the given period of time in the future to the mesh network and thereby causing the at least one other asset in the mesh network to remove the given asset from its routing configuration.

14. The computer-readable medium of claim 8, wherein communicating with the mesh network to cause the routing configuration for at least one other asset in the mesh network to be updated such that the given asset is removed from the routing configuration comprises:

updating the routing configuration for the at least one other asset in the mesh network by removing the given asset from the routing configuration; and

transmitting the updated routing configuration to the mesh network.

15. A computing system comprising:

at least one processor;

a non-transitory computer-readable medium; and

program instructions stored on the non-transitory computer-readable medium that are executable by the at least one processor to cause the computing system to:

receive, from a mesh network comprising a plurality of assets at a remote location, respective operating data for each asset in the mesh network that is indicative of the operating conditions of the asset, wherein each asset is equipped with a respective set of sensors for monitoring the operating conditions of the asset;

for each asset in the mesh network, execute a respective predictive model that takes the respective operating data for the asset as inputs and outputs a respective likelihood value for the asset indicating a likelihood that the asset will become unavailable within a given period of time in the future;

while executing the respective predictive model for each asset in the mesh network, determine that the respective likelihood value for a given asset of the plurality of assets in the mesh network has met threshold criteria indicating that the given asset is likely to be unavailable within the given period of time in the future; and

in response to the determining, communicate with the mesh network to cause a routing configuration for at least one other asset in the mesh network to be updated such that the given asset is removed from the routing configuration.

16. The computing system of claim 15,

wherein receiving the respective operating data for each asset in the mesh network comprises receiving respective sensor data for each asset in the mesh network;

wherein executing a respective predictive model for each asset in the mesh network comprises executing a health score model that takes the respective sensor data for the asset as inputs and outputs a respective health score for the asset indicating a likelihood that an operational failure will occur at the asset within the given period of time in the future; and

wherein determining that the respective likelihood value for the given asset has met threshold criteria indicating that the given asset is likely to be unavailable within the given period of time in the future comprises determining that the respective health score for the given asset has met threshold criteria indicating that the given asset is likely to have an operational failure within the given period of time in the future.

17. The computing system of claim 16, wherein determining that the respective health score for the given asset has met the threshold criteria comprises determining that the respective health score for the given asset has exceeded a health score threshold value for a certain period of time.

18. The computing system of claim 15, wherein determining that the respective likelihood value for a given asset of the plurality of assets in the mesh network has met threshold

criteria indicating that the given asset is likely to become unavailable within the given period of time in the future comprises determining that the respective likelihood value for a given asset of the plurality of assets in the mesh network has met threshold criteria indicating that the given asset is likely to become unavailable due to at least one of a failure at the given asset, the given asset going off-line, a scheduled down time for the given asset, or the given asset being unable to communicate over the mesh network.

19. The computing system of claim 15, wherein the plurality of assets include at least one of a transportation machine, an industrial machine, a medical machine, or a utility machine.

20. The computing system of claim 15, wherein communicating with the mesh network to cause the routing configuration for at least one other asset in the mesh network to be updated comprises:

transmitting an indication that the given asset is likely to become unavailable within the given period of time in the future to the mesh network and thereby causing the at least one other asset in the mesh network to remove the given asset from its routing configuration.