-CLAIMS-

1. A signal processor, comprising:

a storage unit that stores a learning model, wherein:

the learning model is learned by using teaching data with a first synthetic aperture radar received signal as input, the first synthetic aperture radar received signal being based on a reflected electromagnetic wave that is an electromagnetic wave emitted to a first target area and then reflected, and with first meta-information as output, the first meta-information corresponding to the first synthetic aperture radar received signal and having a predetermined item; and

the learning model outputs second meta-information having the predetermined item in response to a second synthetic aperture radar received signal as input, the second synthetic aperture radar received signal based on a reflected electromagnetic wave that is an electromagnetic wave emitted to a second target area and then reflected;

a signal acquisition unit that acquires the second synthetic aperture received signal;

an estimation unit that inputs the second synthetic aperture radar received signal at time 1 and the second synthetic aperture radar received signal at time 2 to the learning model and then estimates the second meta-information at the time 1 corresponding to the second synthetic aperture radar received signal at the time 1 and the second meta-information at the time 2 corresponding to the second synthetic aperture radar received signal at the time 2; and

a change determination unit that determines a change in the second target area on the basis of the second meta-information at the time 1 and the second meta-information at the time 2.

2. The signal processor according to claim 1, wherein:

the learning model is learned by using teaching data with the first synthetic aperture received signal and a first generated signal generated based on the first

synthetic aperture received signal as input and with the first meta-information as output; and

the learning model outputs the second meta-information in response to the second received signal and a second generated signal generated based on the second received signal .

3. The signal processor according to claim 1, wherein:

the learning model is learned by using teaching data with the first synthetic aperture received signal and information indicating an environment in the first target area as input and with the first meta-information as output; and

the learning model outputs the second meta-information in response to the second received signal and information indicating an environment in the second target area as input.

4. The signal processor according to claim 1, wherein:

the learning model is learned by using the teaching data with the first meta-information containing the information indicating the environment in the first target area as output; and

the learning model outputs the second meta-information containing the information indicating the environment in the second target area.

5. The signal processor according to claim 1, further comprising a change information output unit that outputs change information indicating the change in the case where the determined change satisfies a predetermined condition.

6. A flying object comprising the signal processor according to claim 1, the signal processor further comprising a signal output unit that outputs an output signal based on the second meta-information to the outside.

7. A non-transitory computer-readable medium storing program causing a computer to perform:

a signal acquisition process for acquiring a second synthetic aperture received signal that is input to the storage unit that stores a learning model wherein:

the learning model is learned by using teaching data with a first synthetic aperture received signal as input, the first received synthetic aperture signal being based on a reflected electromagnetic wave that is an electromagnetic wave emitted to a first target area and then reflected, and with first meta-information as output, the first meta-information corresponding to the first synthetic aperture received signal and having a predetermined item; and

the learning model outputs second meta-information having the predetermined item in response to a second synthetic aperture radar received signal as input, the second synthetic aperture received signal based on a reflected electromagnetic wave that is an electromagnetic wave emitted to a second target area and then reflected;

an estimation process for inputting the second synthetic aperture received signal at time 1 and the second synthetic aperture received signal at time 2 to the learning model and then estimates the second meta-information at the time 1 corresponding to the second synthetic aperture received signal at the time 1 and the second meta-information at the time 2 corresponding to the second synthetic aperture received signal at the time; and

a change determination process for determining a change in the second target area on the basis of the second meta-information at the time 1 and the second meta-information at the time 2.

8. The non-transitory computer-readable medium storing program according to claim 7, causing the computer to further perform a signal output process for outputting the output signal based on the second meta-information to the outside.