CLAIMS

1. A layout creation device comprising:

a position data acquiring unit to acquire position data indicating an installation position of each of electrical appliances installed in a space;

a layout creating unit to create layout data indicating a layout of the electrical appliances for the space by giving the position data and usage condition data indicating a usage condition of each of the electrical appliances to a learning model;

an operation rate calculating unit to calculate an operation rate of each of the electrical appliances on a basis of an energization time of each of the electrical appliances, wherein

as the usage condition data, operation rate data indicating the operation rate calculated by the operation rate calculating unit is used, and

in the layout indicated by the layout data, an electric appliance whose operation rate is lower than a first threshold is displayed not to be included as an installation recommended electrical appliance and an electric appliance whose operation rate is higher than a first threshold is displayed to be included as installation recommended electrical appliance.

2. The layout creation device according to claim 1, wherein the electrical appliance is supplied with power from a non-contact power supply coil installed in the space.

3. The layout creation device according to claim 2, wherein

the usage condition data is calculated on a basis of a power supply condition of the non-contact power supply coil, and

the position data indicates an installation position of the non-contact power supply coil that supplies power to the electrical appliance.

4. The layout creation device according to claim 1, wherein the layout data includes an installation recommended electrical appliance and an installation position of the installation recommended electrical appliance.

5. The layout creation device according to claim 1, further comprising a path observing unit to output path data indicating a path taken by a user living in the space through the space, wherein

the layout creating unit creates the layout data by giving the path data to the learning model in addition to giving the position data and the usage condition data to the learning model.

6. The layout creation device according to claim 1, wherein the layout creating unit creates the layout data by giving one or more pieces of data among family data indicating a family structure of a user living in the space, animal presence data indicating presence or absence of an animal in the space, and hobby data indicating a hobby of the user to the learning model in addition to giving the position data and the usage condition data to the learning model.

7. The layout creation device according to claim 1, wherein

the position data acquiring unit acquires the position data of the electrical appliance installed in the space where the user who has a billing contract lives, and

the layout creating unit creates the layout data of the electrical appliance for the space where the user lives.

8. A layout creation method comprising:

acquiring, by a position data acquiring unit, position data indicating an installation position of each of electrical appliances installed in a space;

creating, by a layout creating unit, layout data indicating a layout of the electrical appliances for the space by giving the position data and usage condition data indicating a usage condition of each of the electrical appliances to a learning model; and

calculating, by an operation rate calculating unit, an operation rate of each of the electrical appliances on a basis of an energization time of each of the electrical appliances, wherein

as the usage condition data, operation rate data indicating the operation rate calculated by the operation rate calculating unit is used, and

in the layout indicated by the layout data, an electric appliance whose operation rate is lower than a first threshold is displayed not to be included as an installation recommended electrical appliance and an electric appliance whose operation rate is higher than a first threshold is displayed to be included as installation recommended electrical appliance.

9. A learning model generation device comprising:

a data acquiring unit to acquire position data indicating an installation position of each of electrical appliances installed in a space, usage condition data indicating a usage condition of each of the electrical appliances, and training data indicating a layout of the electrical appliances for the space;

a learning model generating unit to learn a layout of one or more electrical appliances suitable for installation in the space using the position data, the usage condition data, and the training data, and generate a learning model that outputs layout data indicating a layout for a certain space of all electrical appliances installed in the

certain space or a part of electrical appliances installed in the certain space when position data indicating an installation position of the electrical appliances installed in the certain space and usage condition data indicating a usage condition of the electrical appliances installed in the certain space are given; and

an operation rate calculating unit to calculate an operation rate of each of the electrical appliances on a basis of an energization time of each of the electrical appliances, wherein

as the usage condition data, operation rate data indicating the operation rate calculated by the operation rate calculating unit is used, and

in the layout indicated by the layout data, an electric appliance whose operation rate is lower than a first threshold is displayed not to be included as an installation recommended electrical appliance and an electric appliance whose operation rate is higher than a first threshold is displayed to be included as installation recommended electrical appliance.

10. A learning model generation method comprising:

acquiring, by a data acquiring unit, position data indicating an installation position of each of electrical appliances installed in a space, usage condition data indicating a usage condition of each of the electrical appliances, and training data indicating a layout of the electrical appliances for the space;

learning, by a learning model generating unit, a layout of one or more electrical appliances suitable for installation in the space using the position data, the usage condition data, and the training data, and generating a learning model that outputs layout data indicating a layout for a certain space of all electrical appliances installed in the certain space or a part of electrical appliances installed in the certain space when position data indicating an installation position of the electrical appliances installed in the certain space and usage condition data indicating a usage condition of the electrical appliances installed in the certain space are given; and

calculating, by an operation rate calculating unit, an operation rate of each of the electrical appliances on a basis of an energization time of each of the electrical appliances, wherein

as the usage condition data, operation rate data indicating the operation rate calculated by the operation rate calculating unit is used, and

in the layout indicated by the layout data, an electric appliance whose operation rate is lower than a first threshold is displayed not to be included as an installation recommended electrical appliance and an electric appliance whose operation rate is higher than a first threshold is displayed to be included as installation recommended electrical appliance.