

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

What is claimed is:

1.-20. (Canceled)

21. (New) A system for intelligent power management, comprising:
an appliance having a battery module, the battery module being configured to provide power to the appliance;
a sensor coupled to the appliance to monitor an operation condition of the appliance at a specific time point; and
a control unit communicatively coupled to the sensor to collect information obtained from the sensor, the control unit being configured to determine whether to adjust power provided to the appliance from the battery module based on the operation condition of the appliance.

22. (New) The system of claim 21, wherein the appliance is a stove and the sensor is a video sensor.

23. (New) The system of claim 22, wherein the video sensor is configured to monitor a cooking process.

24. (New) The system of claim 23, wherein the control unit is configured to determine whether to adjust power provided to the stove from the battery module according to the cooking process and a predefined cooking protocol.

25. (New) The system of claim 21, wherein the appliance is a refrigerator and the sensor is a video sensor.

26. (New) The system of claim 25, wherein the video sensor is configured to detect type of items stored in the refrigerator.

27. (New) The system of claim 26, wherein the control unit is configured to determine whether to adjust power provided to the refrigerator from the battery module according to the detected type of items stored in the refrigerator.

28. (New) The system of claim 21, wherein the control unit is further configured to determine a charge and discharge schedule for the battery module based on a power usage pattern of the appliance.

29. (New) The system of claim 28, further comprising one or more sensors or third party services coupled to the control unit and configured to collect contextual information related to one or more of the battery module or the appliance.

30. (New) The system of claim 29, wherein the control unit further comprises a machine learning model trained to predict a usage of the appliance based on the collected contextual information.

31. (New) The system of claim 30, wherein the control unit is further configured to adjust the determined charge and discharge schedule based on the predicted usage of the appliance by the trained machine learning model.

32. (New) The system of claim 28, further comprising a physical user interface configured to receive a user input for manually editing the charge and discharge schedule for the battery module at a time point.

33. (New) A method of intelligent power management, comprising:
monitoring an operation condition of an appliance at a specific time point, wherein the operation condition is monitored by a sensor coupled to the appliance;

collecting power usage data of the appliance at the specific time point, wherein the power usage data indicates power provided to the appliance by a battery module included in the appliance; and

determining whether to adjust power provided to the appliance from the battery module based on the operation condition of the appliance and power usage data of the appliance.

34. (New) The method of claim 33, wherein the appliance is a stove and the sensor is a video sensor.

35. (New) The method of claim 34, wherein the video sensor is configured to monitor a cooking process.

36. (New) The method of claim 35, wherein determining whether to adjust power provided to the appliance includes determining whether to adjust power provided to the stove from the battery module according to the cooking process and a predefined cooking protocol.

37. (New) The method of claim 33, wherein the appliance is a refrigerator and the sensor is a video sensor.

38. (New) The method of claim 37, wherein the video sensor is configured to detect type of items stored in the refrigerator.

39. (New) The method of claim 38, wherein determining whether to adjust power provided to the appliance includes determining whether to adjust power provided to the refrigerator from the battery module according to the detected type of items stored in the refrigerator.

40. (New) The method of claim 33, further comprising:
determining a charge and discharge schedule for the battery module based on a power usage pattern of the appliance.