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Patent Search

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Abstract:

Receiving a vehicle charging request from a second vehicle while a first vehicle already exists in a charging queue and is being charged is one example of a step that is included in a method for reinforcement learning-based vehicle charging. In response to the vehicle charging request from the second vehicle, determining a charging mode for the second vehicle and determining a designated position for the second vehicle in the charging queue can be done based on both a charging learning model generated based on the behavior of the first vehicle in the charging queue and a reinforcement learning model.

Complete Specification

Description: The proposed invention related to Electrical vehicle charging station.

Background of the Invention:

A vehicle that gets its propulsion from one or more electric motors that are each driven by a separate high-voltage battery is referred to as an electric vehicle (EV). The high voltage batteries that are installed in electric cars (EVs) are charged using equipment that is located outside of the vehicle. Electric vehicles may be charged using private or public EV chargers.

Chargers for electric vehicles that are considered to be public are utilized by a number of people whose identities are not disclosed. When there are accessible EV charging stations, electric vehicles that need to be charged may have their batteries replenished. When all of the electric vehicle (EV) chargers that are connected to the power supply equipment are in use or when an EV is being charged from an EV charger at the maximum power rate that can be delivered from the power supply equipment, other EVs are required to wait until the current charging process is finished before they can begin their own charging process.

In order to find a solution to this issue, several strategies for controlling or scheduling electric vehicle charging services have been developed.

The technique and system for charging electric vehicles that is the subject of the present invention are ones that are based on reinforcement learning. To be more specific, the present invention relates to a method and system for charging an electric vehicle (EV), said method and system being able to suggest a charging rate and a charging mode to a user based on a reinforcement learning-based EV charging service model. The invention also relates to an electric vehicle (EV) charging service model.

The provision of an electric vehicle charging system that is capable of automatically proposing an electric vehicle charging mode to a user by utilizing a vehicle charging service learning model that was created based on records of previous charging events related to the user is one of the goals of the present invention. Another goal of the present invention is to provide a user with a charging mode that is suitable for the user's current situation.

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