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(57) Abstract :
Disclosed herein is a standby time forecasting system (STi-BYTE) for enhanced EV charging station management (100) comprises a data acquisition module (102) configured to detect and count the number of electric vehicles (EVs) present at an EV charging station at a given moment. The system also includes a microcontroller-based computational unit (104) configured to receive real-time vehicle count data from the ultrasonic sensors, and calculate a waiting time (W) for a new incoming EV. The system also includes a display and communication interface (106) configured to transmit the calculated waiting time (W) to a remote mobile application interface. The system also includes a network interface (108) configured to establish a wireless internet connection between the NodeMCU and the Blynk app via an external computing device. The system also includes a structural support substrate (110) configured to physically support and align the components of the system.

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