

Offgrid and Hybrid Charging Stations for Electric Vehicle

Vaishnavi Patil¹, Rutwik Kamthe², Rohit Gaikwad³, Shubham Kokate⁴, Pallavi Ahire⁵

Students, Department of Information Technology^{1,2,3,4}

Professor, Department of Information Technology⁵

Sinhgad Institute of Technology, Lonavala, Maharashtra, India

Abstract: In Recent years car companies like TATA, TESLA introduced and launches new electric cars in the market. For charging these cars some of the stations are also set up. But considering the current situation, these cars take at least 15 minutes to half an hour to charge. If station is full and all the slots are filled previously then other customers have to wait for a long time. Our idea is to develop a system which will solve these kinds of issues. We are developing a system in which we going to connect all the electric car charging stations together. By using our system user can find the station according to their choice and it will be useful for those who want to travel for long distance with their EV cars and it will be time saving. It will be very easy to use. If the given time slot is available then your place for the given slot will be booked. Otherwise system will ask to enter the new time schedule. In this system user has to pay some percent of amount online to confirm their booking. Our system will also provide shortest map route to reach at given station. Our system will also provide interface for charging stations to view all available slots as well as booked slot lists and manage slot timing. We are going to develop this system for web based devices. To develop this system, we are going to use time-slot allocation techniques as well as Google maps API for direction sensing. Our chatbot system will Control software via vocal commands. With the help of online payment gateway user can pay money quickly. Also the feature of choosing offgrid & hybrid charging will be there. By using the system peoples will save their so much time and they can view and book appropriate station easily.

Keywords: Electric Vehicle, Slot, Map, Payment, Stations

REFERENCES

- [1] A Comprehensive Review on Off-Grid and Hybrid Charging Systems for Electric Vehicles GAUTAM RITURAJ 1 (Member, IEEE), GAUTHAM RAM CHANDRA MOULI 1 (Member, IEEE), AND PAVOL BAUER 1 (Senior Member, IEEE) accepted 13 April 2022
- [2] Achmadfitro: Shortest Route at Dynamic Location with Node Combination-Dijkstra Algorithm
- [3] Subhash S, Prajwal N Srivatsa, SiddeshS: Artificial Intelligence Based Voice Assistant: Fourth World Conference on Smart Trends in Systems, Security and Sustainability (WorldS4).
- [4] Binod Vaidya1, Hussein T. Mouftah: Smart Electric Vehicle Charging Management for Smart cities: IET Research Journals, The Institution of Engineering and Technology