Siddhant College of Engineering, Sudumbare,
Department of Computer Engineering

PRESENTATION ON

EV Charging stations management system

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B.E.(Computer)

Academic Year 2023-24

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- OBJECTIVES
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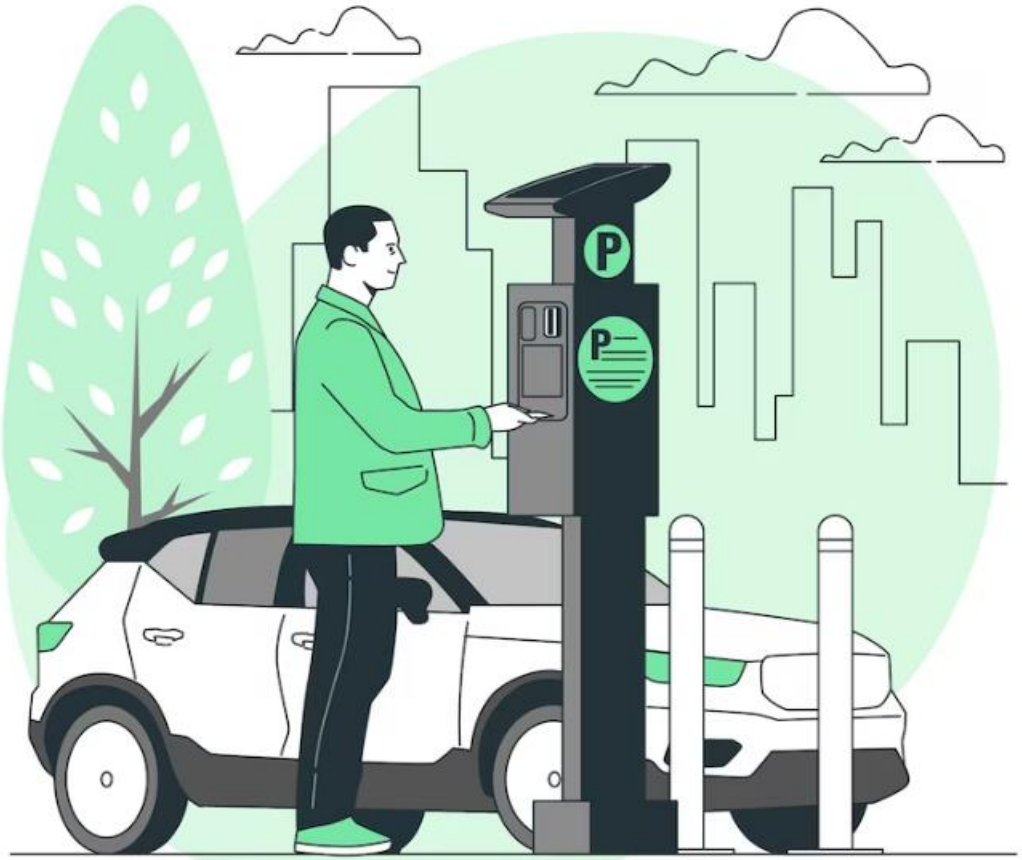
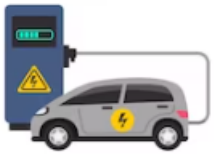
- REFERENCES



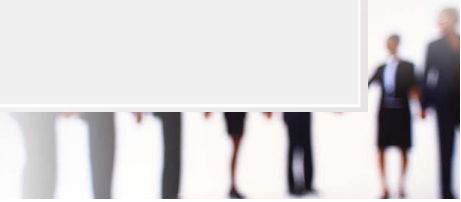
Introduction

- As we know EV Automobiles going to be future of the world but these machines need charging stations for charging.
- In this project work, system will provide the platform to book charging slots to available charging station according to need of customer.
- In this system user will get facilities like chatbot to book station, Maps features for direction sensing, payment option, Notifications of each activity.
- In this system user will get facilities like Static Payment and Static Maps.



Literature Review

Ref. No.	Paper Title	Authors	Research outcome
1	Smart Electric Vehicle Charging Management for Smart Cities	Binod Vaidya, Hussein T. Mouftah	In this paper, we have learned to designed and implemented a smart EV charging management system that include effective reservation management and efficient allocation of time slots of charging stations.
2	Voice Control Device using Raspberry Pi	Pooja Singh, Pinki Nayak, Arpita Datta, Depanshu Sani, Garima Raghav, Rahul Tejpal.	We learned algorithm to develop Virtual Personal Assistant (VPA).
3	Shortest Route at Dynamic Location with Node Combination-Dijkstra Algorithm	Achmad Fitro, Suryono, Retno kusumaningrum	This research has given the idea of shortest route search system.
4	Online Payment for Access to Heterogeneous Mobile Networks	Heiko Knospe, Scarlet Schwiderski-Grosche	This research gives the knowledge about the implementation of payment gateway in a system.



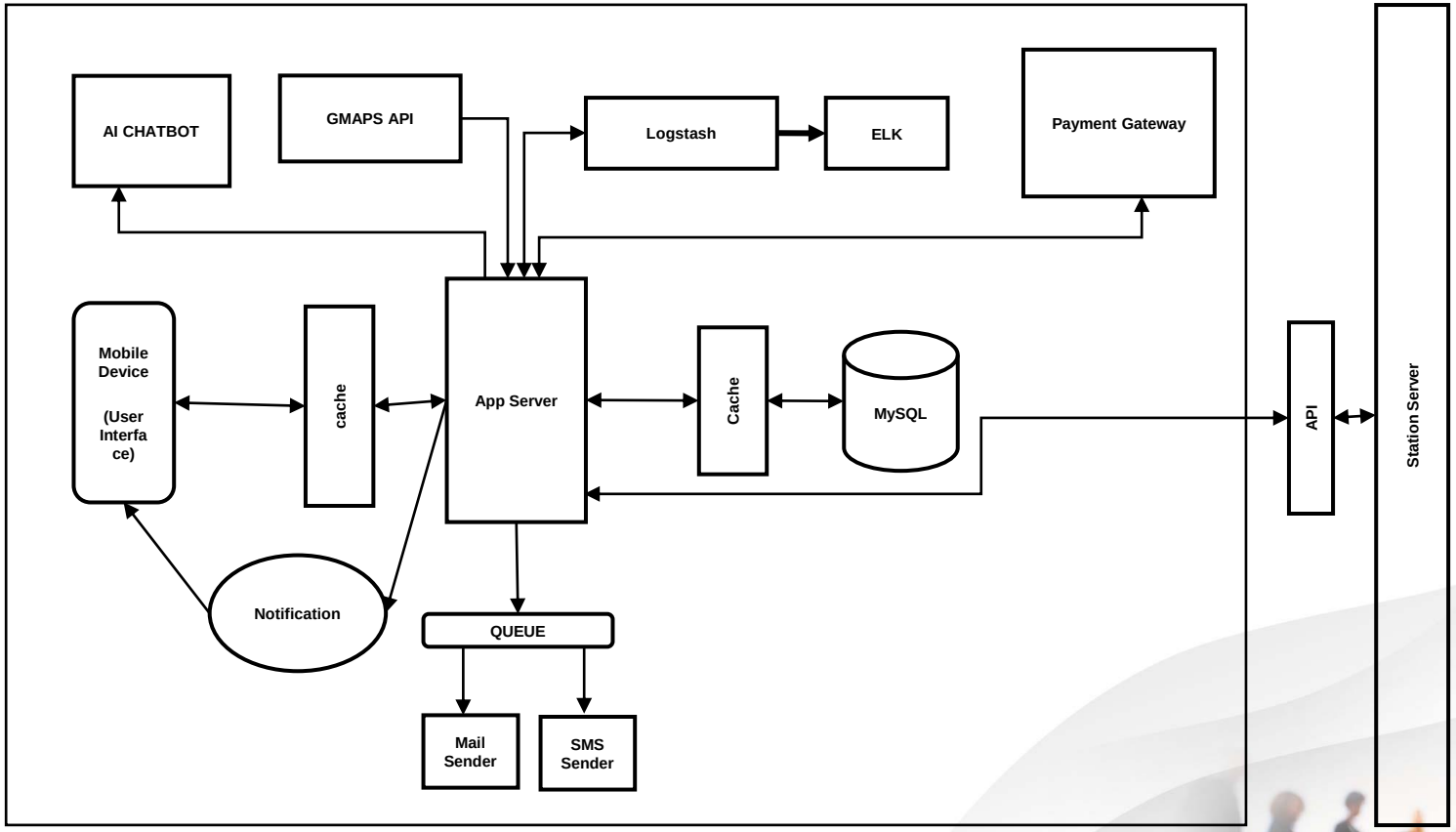
Objectives

- To design simple and adaptive interface which easily understandable to everyone.
- To connect multiple charging stations together via single system.
- To available a nearest stations details and route to reach at station via maps.
- To implement a system which will make easy to book and charge electric cars for car users.
- To give feedback about charging stations.
- To support all type of charging like AC, DC, hybrid etc.

Problem Statement

- **To design and develop a web-based android application to book the charging slot to charge the electric vehicle. The system also proposes the slot booking according to charging socket type.**

System Architecture



Tools Used

Software Requirement

- Operating System - Windows 7/8/10
- Application Server - Apache Tomcat 7/8/9
- Front End - HTML, JSP, CSS, Bootstrap
- Scripts - JavaScript.
- Language - Java
- Database - My SQL
- IDE - Eclipse

Hardware Requirement

- Processor - Intel i3/i5/i7
- RAM - 2 GB(min)
- Hard Disk - 40 GB
- Speed - 1.1 GHz
- Key Board - Standard Windows Keyboard
- Mouse - Two or Three Button Mouse

Applications

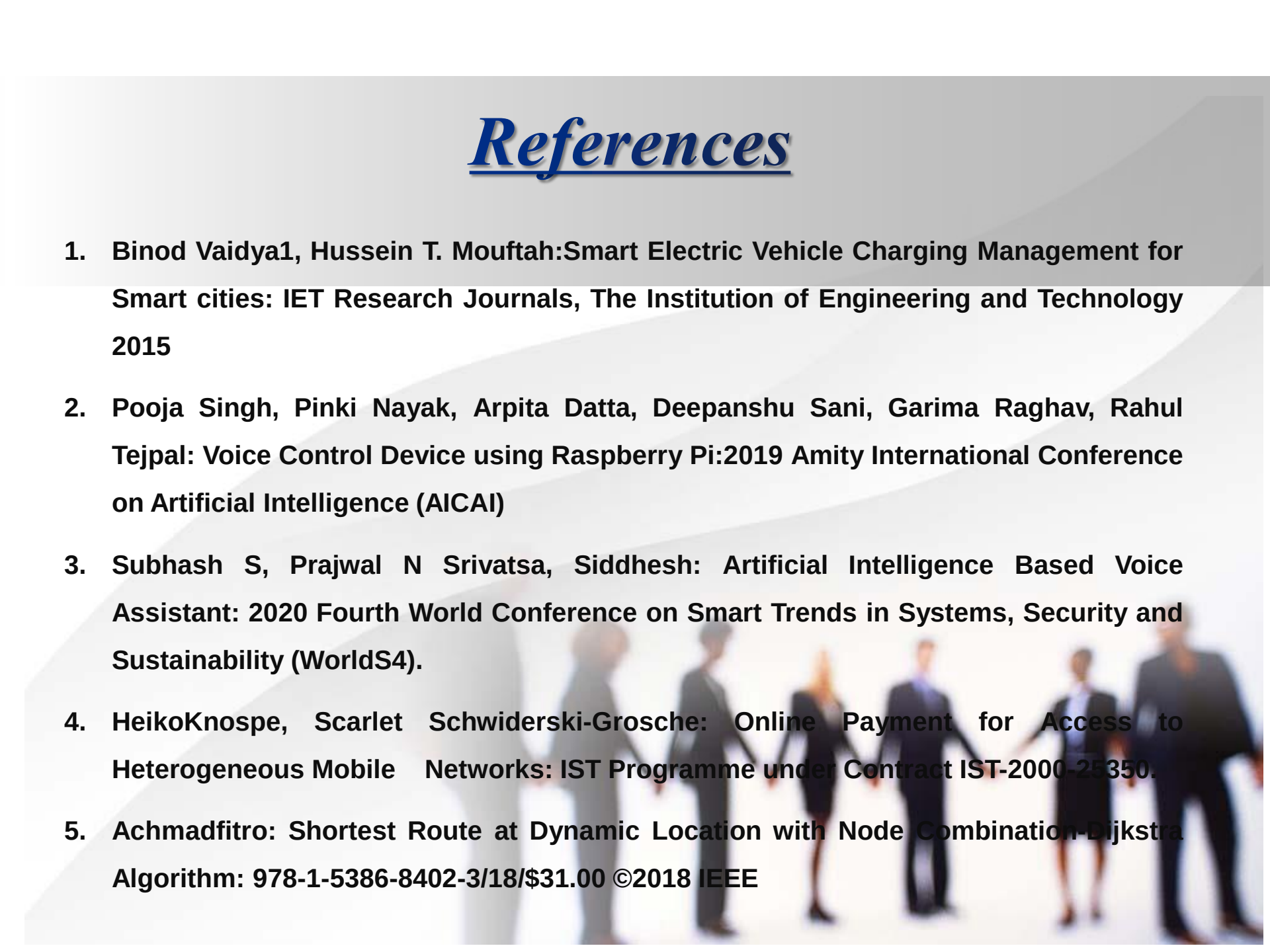
- Online Booking System
- Slot Allocation System
- Efficient Charging
- Billing and Payments
- Load Management
- Public Charging Networks

Conclusion

- System is developed as a “Smart Management of EV Charging Stations” with hybrid approach of web application development. The system also proposes the booking of charging slot according to the type of charging socket to car. This system is also contains the chatbot for query solving as well as GMAPS API for direction sensing.

References

1. Binod Vaidya1, Hussein T. Mouftah:Smart Electric Vehicle Charging Management for Smart cities: IET Research Journals, The Institution of Engineering and Technology 2015
2. Pooja Singh, Pinki Nayak, Arpita Datta, Deepanshu Sani, Garima Raghav, Rahul Tejpal: Voice Control Device using Raspberry Pi:2019 Amity International Conference on Artificial Intelligence (AICAI)
3. Subhash S, Prajwal N Srivatsa, Siddhesh: Artificial Intelligence Based Voice Assistant: 2020 Fourth World Conference on Smart Trends in Systems, Security and Sustainability (WorldS4).
4. HeikoKnospe, Scarlet Schwiderski-Grosche: Online Payment for Access to Heterogeneous Mobile Networks: IST Programme under Contract IST-2000-25350.
5. Achmadfitro: Shortest Route at Dynamic Location with Node Combination-Dijkstra Algorithm: 978-1-5386-8402-3/18/$31.00 ©2018 IEEE

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