SMART ONLINE PARKING AND RESERVATION SYSTEM

A PROJECT REPORT

Submitted by,

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Under the guidance of,

Dr. Bhavana A

in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY
IN

COMPUTER SCIENCE AND ENGINEERING

At

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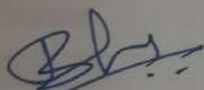
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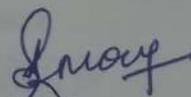### MAY 2025

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ENGINEERING

CERTIFICATE

This is to certify that the Project report "SMART ONLINE PARKING AND RESERVATION SYSTEM" submitted by "DRUTHI D, PRAKRUTHI GOWDA G T, J MANGALAGOURI, NISHA V SALEHITTAL" bearing roll number "2011CSE0592, 20211CSE0580, 20211CSE0614, 20211CSE0585" in partial fulfillment of the requirement for the award of the degree of Bachelor of Technology in Computer Science and Engineering is a bonafide work carried out under my supervision.
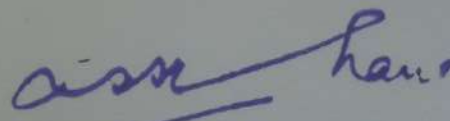
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DECLARATION

We hereby declare that the work, which is being presented in the report entitled "SMART ONLINE PARKING AND RESERVATION SYSTEM " in partial fulfillment for the award of Degree of Bachelor of Technology in Computer Science and Engineering, is a record of my own investigations carried under the guidance of Dr BHAVANA A, Assistant Professor(Selection Grade), Presidency School of Computer Science and Engineering, Presidency University, Bengaluru.

I have not submitted the matter presented in this report anywhere for the award of any other Degree.

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ABSTRACT

1. Introduction

Smart Online Parking and Booking System provides a parking boom problem solution of the urban environment by an online solution to control available parking space. It provides a hassle-free facility to the users to discover, book, and manage parking space, thus providing convenience to relieve traffic congestion and urban mobility.

2. User Features

- The system provides convenience to the user in the following manner:
- Account Sign-Up and Vehicle Administration: It is possible to sign up for a profile, enter car information, and personalize personal dashboards.
- Parking Space Find and Reserve: There is an interactive map wherein one can find spaces by place and time and reserve them on the spot.
- Live Availability Notices: Occupiers can indicate exit on use of a space to notify others of the live availability.
- Feedback and Ratings: Customers leave ratings for parking experience in a space, i.e., quality of service and transparency.

3. Lender Capabilities

- For lending companies or institutions with free parking lots:
- Space Listing and Management: Lenders are able to list, renew, and manage their parking lots, availability, and fees.
- Reservation Management: A dashboard is employed to allow lenders to easily view existing as well as pending reservations.
- User Rating: Quality and authenticity of presence can be guaranteed through real ratings and reviews.

4. Technical Architecture

Application is developed on:

Backend: In Spring Boot for secure, scalable, and best-in-class service logic.

Frontend: Developed in React for dynamic, responsive UI.

Database: MySQL as the database to store structured data such as user profiles, reservations, and feedback.

5. Benefits and Impact

- Urban Efficiency: Saves time wasted searching for parking and minimizes traffic and emiss Resource Optimization: Invites maximum usage of available parking space.
- Scalability and Accessibility: Can be scaled up to other cities and made localized.

ACKNOWLEDGEMENT

First of all, we indebted to the GOD ALMIGHTY for giving me an opportunity to excel in our efforts to complete this project on time.

We express our sincere thanks to our respected dean **Dr. Md. Sameeruddin Khan**, Pro-VC – Engineering and Dean, Presidency School of Computer Science and Engineering & Presidency School of Information Science, Presidency University for getting us permission to undergo the project.

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We are greatly indebted to our guide **Dr. BHAVANA A**, Associate Professor and Reviewer **Dr. VIJAY KUMAR ADAICKALAM**, Professor, Presidency School of Computer Science and Engineering, Presidency University for his inspirational guidance, and valuable suggestions and for providing us a chance to express our technical capabilities in every respect for the completion of the internship work.

We would like to convey our gratitude and heartfelt thanks to the CSE7301 Internship/University Project Coordinator **Mr. Md Ziaur Rahman** and **Dr. Sampath A K**, department Project Coordinators **Dr. Anand Prakash** and Git hub coordinator Mr. Muthuraj.

We thank our family and friends for the strong support and inspiration they have provided us in bringing out this project.

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