

website: http://www.sandipuniversity.edu.in

APROJECT REPORT ON "Task Guardian: A Smart Reminder System for Cognitive Support"

UNDER THE FACULTY OF COMPUTER SCIENCE & APPLICATION

Submitted by

Mr. Tilak Badgujar

Guide

Dr. Deepali Chaudhari

Assistant Professor

Department of Computer Science and Application School of Computer Sciences and Engineering Sandip University, Nashik

> BCA Sem-VI Academic Year 2024- 2025



website: http://www.sandipuniversity.edu.in

CERTIFICATE

This is to certify that **Mr. Tilak Badgujar**, PRN No. **220105011113** Student of BCA Semester-VI has successfully completed the Project work on Title "Task Guardian: A Smart Reminder System for Cognitive Support" under my guidance. This report submitted to Department of Computer Science and Application, School of Computer Sciences and Engineering, Sandip University, Nashik in the AY 2024-25 for partial fulfillment and requirement for the End Semester Examination.

Dr. Deepali Chaudhari	
Project Guide	HOD
Examiner	Dean
Examiner	Dean

Place: Sandip University, Nashik

Date:



website: http://www.sandipuniversity.edu.in

DECLARATION

I here by declare that the Project work titled "Task Guardian: A Smart Reminder System for Cognitive Support" submitted to Sandip University, Nashik is a record of an original work done by me under the guidance of **Dr. Deepali Chaudhari** Department of Computer Science and Application, School of Computer Sciences and Engineering, Sandip University in the AY 2024-25 for a partial fulfillment of requirement for the Completion of End Semester Examination.

This report has not been submitted to any other University or Institute for the award of any degree or diploma.

Student Name: Mr. Tilak Badgujar (PRN:220105011113)

Place: Sandip University, Nashik

Date:



website: http://www.sandipuniversity.edu.in

ACKNOWLEDGEMENT

I would like to express my special thanks of gratitude's to my Project guide **Dr. Deepali Chaudhari** Department of Computer Science and Application, School of Computer Sciences and Engineering, Sandip University, Nashik for his able guidance and support in completing this report.

I would like to extend my gratitude to **Dr. Amol Potgantwar**, Director, SOCSE, **Dr. Vaibhav Sonaje**, Associate Dean, SOCSA for providing me with all the facility that was required to complete this report successfully.

I also thank the management of Sandip University, Nashik for providing me infrastructure and lab facility to completion of this Project.

At last, but not the least I am thankful to all faculty members, staff, and friends who have been always helping and encouraging me throughout the period of this project.

Name of Student: Mr. Tilak Badgujar (PRN:220105011113)

Abstract

The Task Guardian: A Smart Reminder System for Cognitive Support is an open-source, fully customizable solution designed to streamline personal task management through the use of smart reminders and intelligent scheduling techniques. This project eliminates the inefficiencies of traditional task tracking by offering individuals, professionals, and developers a robust, reusable platform focused on cognitive assistance, deadline management, and user engagement. By leveraging modern technologies such as Flask, JavaScript, and PostgreSQL, the system delivers high accuracy, scalability, and a clean user interface tailored to modern productivity needs.

At its core, the project features a powerful smart task management engine that supports dynamic creation, categorization, and prioritization of tasks. With built-in features for intelligent reminders and user-based task recommendations, Task Guardian adapts to the user's routine and helps optimize daily workflows. The solution integrates seamlessly with frontend technologies like HTML, CSS, and JavaScript, ensuring a responsive and interactive web experience across devices.

Developers can set up the system easily by cloning the repository, installing Python dependencies, configuring the PostgreSQL database, and launching the Flask server locally. With an intuitive interface that allows users to create, edit, and track tasks while receiving timely cognitive reminders, the system enhances productivity and reduces mental clutter.

Furthermore, the project embraces community-driven development. Comprehensive documentation and an open contribution model invite users to report issues, suggest new features, or improve the task management logic—fostering an evolving ecosystem around personal productivity enhancement.

Overall, the Task Guardian project represents a complete, extensible toolkit for students, professionals, and productivity enthusiasts. It offers a flexible, smart, and feature-rich platform that simplifies task scheduling and encourages better organization, all while upholding high standards of usability and reliability.

Keywords: (Flask API, PostgreSQL, Smart Reminders, Task Scheduling, Cognitive Support, JavaScript, HTML, CSS)

List of Figure

	Figure Name	Page No.
1	Sequence Diagram	17
2	Deployment Diagram	18
3	Component Diagram	19
4	Entity Relationship Diagram	27
5	UML Diagram	28
6	Data Flow Diagram	31
7	Use Case Diagram	33

TABLE OF CONTENT

Chapter	Chapter Name	Page No
1	Introduction	1
1.1	Introduction	1
1.2	Existing System	2
1.3	Objective	3
1.4	Scope of Work	4
1.5	Operating Environment	5
1.5.1	Software Specification	6
1.5.2	Hardware Specification	7
1.6	Description of Technology Used	8
2	Literature Review	10
3	Proposed System/ Methodology	12
3.1	User Requirement Specification	12
3.2	Creation of a Dataset	12
3.3	Pre-processing	14
3.4	Feature Extraction	15
3.5	Sequence Diagram	16
3.6	Deployment Diagram	17
3.7	Component Diagram	19
4	Result and Implementation	20
4.1	Methods/ Techniques	20
4.2	Implementation	21
4.3	Entity Relationship Diagram	27
4.4	UML Diagram	28
4.5	Module Specification	29
4.6	Data Flow Diagram	30
4.7	User Interface Design	34
4.8	Use Case Diagram	36
4.9	Output/ Screenshot	37
5	Conclusion	42
5.1	Conclusion	42
5.2	Limitations	42
5.3	Future Enhancements	43
	Bibliography	44

