Protocorio

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ABSTRACT

This project aims to develop a time management app that helps users with daily planning, health management, like eating and drinking, and logistical issues, such as shopping. The system will provide notifications and reminders for tasks like assignments, appointments, exercise, goals, meals, hydration, and sleep. The goal is to help users gain a balance in life with productivity and wellness by creating a schedule for the user for optimal living conditions. This project would start as a full-stack web application for accessibility, utilizing APIs like Google Maps for traffic information and an AI model of choice to manage efficient time management. The tracking of the statistics of the User's lifestyle would help the User with visualizing the data of their health.

CCS Concepts

• Information systems → decision support systems, location-based systems
• Human centered computing → web-based design, visualization systems, personal assistant
• Computing methodologies → artificial intelligence
• Software and its engineering → software architecture, web application
• Applied computing → personal information management, health informatics

Keywords

• Time management; scheduling systems; AI assistant; wellness tracking; full-stack web application; intelligent reminders; productivity tools.

1. INTRODUCTION

Many people struggle with balancing academics, work, and personal responsibilities. Missed deadlines, time management, and unhealthy living are results of ineffective planning. The project aims to help people with an assistant that can do the planning optimally that tracks tasks, life responsibilities, and work on behalf of the user to make their lives easier. The assistant would ask the user for their daily activities, height, weight, and needs, like if they have to go to the bank, and the assistant would make an optimal schedule considering traffic, time availability, and bodily functions. AI assistants like Google Assistant, Siri, and Alexa are useful to people but are simple in their function, as they do not effectively plan for the user, but set a reminder for them.

2. RELATED WORK

After researching and obtaining knowledge on the topic of this project, many studies talked on the growing need or importance of having smart wellness tracking and productivity tools.

Studies such as Normurodov & Ayoobkhan (2021) have shown an example of an agent-based dynamic scheduling system that helps adjust schedules in a real time format [1]. Some parts of the paper includes frontend and backend features including explanations on how they are set up. These ideas are noted for possible formation of this project and what features to include.

In the works of Singh et al. (2024) and Zhao et al. (2023), both authors developed mobile apps that are meant to be productive for college students [2], [6]. It focuses on the need for task management and intelligent reminders. Although it will be challenging to create a mobile version, the project will be adjusted to run as a web-based application instead.

Taken from these related works into consideration, this project extends into combining health data, user habits, scheduling algorithms and an AI assistant. Multiple frameworks were inspired to create scalable and easy designs suitable for the needs of the user. Although only the homepage and login page have been implemented as shown in the results section, the goal is to have the main page look similar to a task management web app.

3. METHOLOGY

This development approach follows an incremental/spiral model. It includes iterative and improving features, architecture, and user experience that will support early testing and modular expansion. The project is currently in the subsection 3.3 and 3.4 phase.

3.1 Problem Definition & Requirements
• Gather goals, users, and constraints.

3.2 Process Model
• Use an incremental/spiral iteration approach to refine features over time.

3.3 Frontend (React)
• Provide task CRUD, calendar display, and settings interface.

3.4 Backend APIs & Database
• Implement authentication, task management, scheduling, and notification endpoints.

3.5 *System Architecture*
• Hybrid design: server-side scheduling + client-side task maintenance.

3.6 *Data Design*
• Define schemas for users, tasks, health metrics, and locations.

3.7 *Scheduling Engine*
• Inputs: tasks, calendar, traffic, health data
• Outputs: ranked schedule based on priority and constraints.

3.8 *Integration & Visualization*
• Connect frontend and backend; display dashboards, analytics, and insights.

3.9 Testing & Evaluation
• Perform unit, integration, and usability testing to validate functionality.

3.10 Deployment & Monitoring
• Launch the system, track performance, gather user feedback, and refine features.

4. RESULTS
The current results include a functional homepage, login interface, and a defined system architecture that supports the feasibility of the proposed design
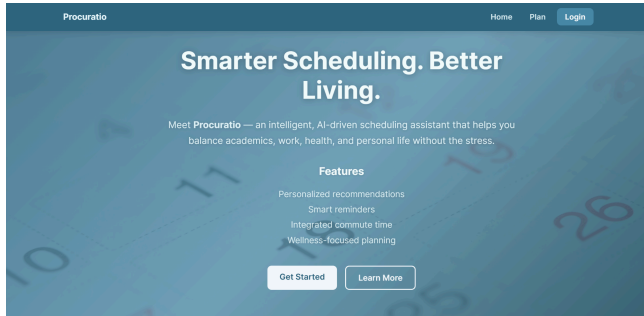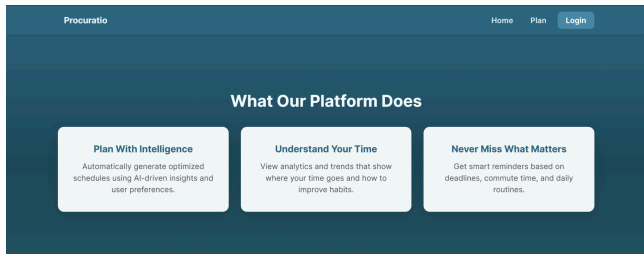

Fig. 1. Homepage
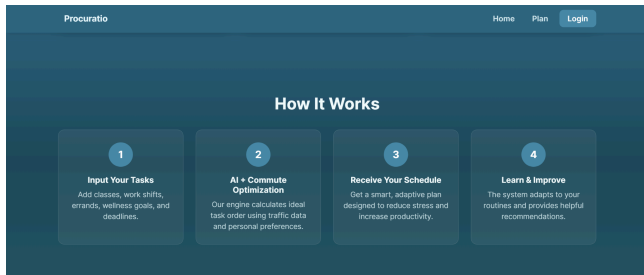

Fig. 1. Homepage - Content Section
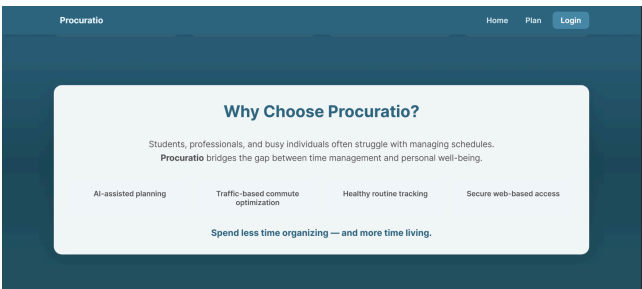

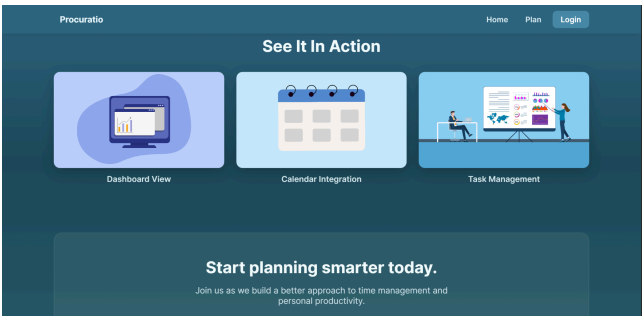Fig. 2. Homepage - Content Section

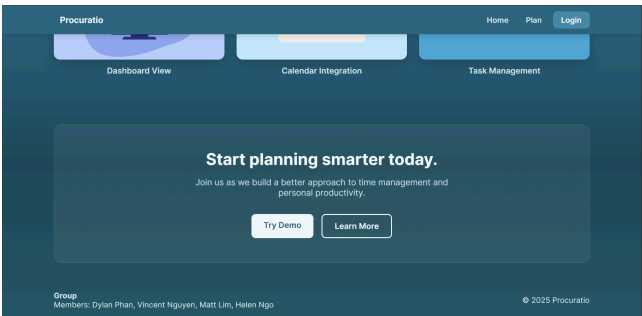Fig. 3. Homepage - Content Section

Fig. 4. Homepage - Content Section
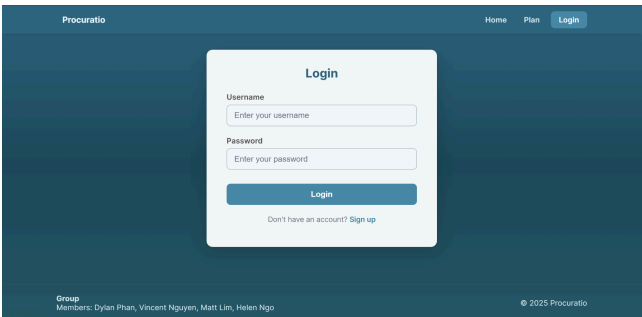

Fig. 5. Homepage - Try Demo

Fig. 6. Login Page

5. CONCLUSION
This project presents a structured and thoughtful approach to addressing common challenges in time management and personal organization. The design and development of a web based planning system established a foundation for integrating Artificial intelligence into planning, productivity support, and wellness into a single platform.

At the current stage the project has a defined system architecture, development methodology, and core components required to

support efficient scheduling. The frontend interface, backend design, and data flow demonstrate the proposed solution and provide a clear path for future expansion.

This delivers a structured approach to time management. This was designed to support smart scheduling decisions. This addresses real-world challenges to productivity and wellness. Having a scalable foundation for AI-driven personalization. This integrates frontend, backend, and data services.

6. ACKNOWLEDGMENTS

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