

Abstract

In today's fast-paced world, efficient time management is crucial for maximizing productivity and achieving goals. This paper presents a novel approach to assist individuals in managing their time effectively by integrating task prioritization and timetable generation using a genetic algorithm within a web-based platform.

The proposed system allows users to input their tasks, along with priority levels and estimated time allocations for each task, through a user-friendly web interface. Additionally, users can specify their preferences and constraints, such as preferred time slots for specific activities or mandatory breaks, to tailor the timetable generation process to their unique needs.

The system utilizes a genetic algorithm to optimize the allocation of tasks within the available time slots, considering factors such as task priorities, estimated durations, and user-defined constraints. The genetic algorithm iteratively evolves a population of timetables, favoring schedules that maximize the completion of high-priority tasks within the specified time constraints.

Through an intuitive web interface, users can interact with the system to view and modify generated timetables, providing flexibility and adaptability to accommodate changes in priorities or scheduling preferences. The system also offers features for visualizing task distributions, identifying potential scheduling conflicts, and receiving real-time recommendations for optimizing time allocation.

Experimental evaluations demonstrate the effectiveness of the proposed approach in generating personalized timetables that balance task priorities, time constraints, and user preferences. The web-based platform provides a convenient and accessible tool for individuals to enhance their time management skills and improve productivity in both personal and professional settings.

In conclusion, the integration of task prioritization and timetable generation within a web-based platform offers a comprehensive solution for efficient time management. By leveraging the power of genetic algorithms, the system enables users to optimize their schedules effectively, leading to increased productivity and overall well-being.