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## Predictive analytics driven time oriented prioritized task assistant under the framework of machine intelligence

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### Abstract

This paper presents a predictive analysis using computational tools, technologies, simulation and application to provide a prioritized tasks assistant for appropriate time management. The objective is to identify the tasks, design and implement the systems, test and refine it with appropriate prioritized structure using production rule of Machine Intelligence.

The motivation behind this work is to create a time management system that is easy to use, flexible and customizable to execute tasks. The scope of this work is versatile including students, professionals and entrepreneurs.

In the model formulation of the problem, the parameter such as difficulty level to keep track of tasks and deadlines, lack of flexibility and customization, time consuming manual tracking are taken into consideration. This is supplemented by a conducted market research to understand the needs and preferences of potential users of the system. In extension, surveys are conducted to collect feedback on system prototypes and improves system design.

In the solution process, performance indicators such as managing tasks-deadlines-schedules, customizable options for different types of tasks-priority levels-alerts, develop automatic tracking and reporting features are considered.

The primary dataset based on survey and popular dataset are used in developing the system with wireframing and time zone support. The incorporation of Voice assistant is also taken into consideration using Android extension.

**Keywords:** Machine intelligence, predictive analytics, prioritized tasks, production systems, time management, voice assistant

### Introduction

What is Time Management? Time management is the skill of using one's time wisely and effectively. It involves planning, organizing, and prioritizing tasks to optimize performance and achieve desired outcomes within a given timeframe. Time management helps to reduce stress, improve focus, and enhance productivity.

- Time management is the skill of planning and systemating your time to make it more useful. In other words, the art of management of time is about getting the most value out of your limited 24 hours. Effective utility of time will head to success and the accomplishment of goals and objectives. Working more hours is not good time management; working more effectively and intelligently is.
- This document presents a system, called the Time oriented task assistant (TOTA), that has been designed to enhance the productivity and performance of a knowledge worker by helping him/her in scheduling as well as executing tasks. From a functional point of view, TOTA focuses on two main domains: (1). Time Management and (2) Task Assistant.
- One of the main challenges that users face in their daily lives is how to effectively manage their time and tasks. Time management is the skill of planning and organizing how to allocate one's time among various activities and obligations. Time management involves not only scheduling meetings and appointments, but also setting reminders, prioritizing tasks, and balancing the workload. By applying time management techniques, users can improve their productivity, efficiency, and satisfaction.

- A task assistant is a software application that helps users to manage various aspects of their tasks, such as setting goals, prioritizing, scheduling, tracking progress, and reporting outcomes. Task assistants can support both personal and project-based tasks, depending on the user's needs and preferences. Personal tasks are those that originate from the user's own interests, hobbies, or obligations, while project-based tasks are those that are assigned or delegated to the user as part of a larger endeavor. Task assistants can help users to plan, execute, and oversee their tasks in a more efficient and effective way, by providing features such as reminders, notifications, feedback, suggestions, and analytics.

According to a recent study by the international company «Chipin & Partner», the average person wastes about 78 days a year on unproductive activities, both in their personal and work life [5, p. 467]. This means that we are losing more than two months of our precious time every year, instead of using it to achieve our goals and fulfill our potential. This is why management of time is the most important skills for modern managers, who need to optimize the performance of their teams and ensure the best results. By managing time effectively, you can increase your productivity, improve your quality of work, and reduce your stress levels. Time management is a set of discernible skills which are crucial in organizing study and work load. One of the key factors that influences academic success is time management. Students who can plan and organize their work efficiently tend to achieve higher grades than those who struggle with managing their time. However, many students face challenges in balancing their academic and personal responsibilities, especially in the context of a demanding and competitive higher education system. Poor time management strategies make it difficult for students to plan their work and may cause them to feel agitated towards the end of a course—when they are likely to be assessed—Scherer, Talley, and Fife (2017) [22] found that perceptual personal behaviours, like a student's time point of view, are effective predictors of academic outcomes. Ling, Heffernan, (2003) [23] also found a link between bad time management and unexpected examination outcomes, although it is unclear whether this is a causal relationship or a result of self-serving bias. In any case, it is evident that student performance and time management are closely related.

One of the key factors that influence student success and satisfaction is time management. As per Krause and Coates (2008) [24], being able to plan and create one's time effectively is essential for developing nice educational habits and achieving academic goals. Time management also helps individuals to structure and control the activities and Wang, Kao, and Huan (2011) [25] showed that time management skills are beneficial not only for academic performance, but also for personal well-being and quality of life. O'Connell (2014) [26] argues that by balancing sleep, exercise, diet, and leisure activities, students can improve their physical health and reduce stress levels, which are often linked to poor time management. Ponton, Carr, and Confessore (2000) [33] suggest that learning requires effort and resilience, especially when students face challenges such as limited time or competing demands. They call this type of time management strategy "planning behavior", which involves estimating the amount of time and effort

needed for different tasks and setting realistic goals and priorities. However, time management is not a one-size-fits-all skill. Different students have different personalities, motivations, self-regulation abilities, and attention spans, which affect how they cope with difficulties and distractions. Therefore, students need to adopt time management strategies that suit their individual needs and preferences, as well as the requirements of their courses and curricula.

Kelly (2002) [27] argues that individuals need to be aware of time and how they use it for different activities. However, Kelly also points out that individuals often misjudge how much time they need to finish a task and rarely give a precise estimation. Effective time management requires optimizing assignments such as initiating one task, maintaining focus, and prioritizing a task over another. Work plans can help with this, but they may not reduce anxiety for students who tend to procrastinate (Lay & Schouwenburg, 1993) [28]. This may be because they know that having a plan does not guarantee that they will start the task on time and manage their multiple tasks well. Britton and Tesser (1991) [29] found a positive link in the middle short-term planning and students' GPA, which suggests that students who practice time management skills are more similar to achieve academic success.

One way to manage time effectively is to plan ahead for short-term goals rather than long-term ones, as Britton and Tesser suggested. This approach can help students adapt to changing situations and unexpected challenges that might arise in their busy lives. However, there is also a downside to this strategy, as it might hinder students from developing important study skills that can enhance their learning outcomes and performance. These skills include motivation, metacognition, and self-regulation, which are crucial for achieving academic excellence and growth (Baothman, Aljefri, Agha, & Khan, 2018) [30].

A knowledge worker has to deal with many different tasks and responsibilities in her job. She needs to be aware of the deadlines and resources that are available for her work, and keep track of what she is doing and what new information might affect her goals and performance. She also needs to work with many people, both inside and outside her organization, to coordinate and collaborate on various projects. However, many organizations are trying to save money and improve efficiency, which means more work for the knowledge workers. At the same time, they are facing a lot of information that they have to sort and process. This leads to high surfaces of cognitive overflow in the workplace (Kirsh 2000) [31].

One of the key factors that can enhance the academic performance and achievements of students is time management. Time management involves setting goals and priorities, using effective strategies and tools to manage time, and being organized and disciplined. Time management requires self-motivation, which is influenced by performance, ability and motivation. Many university students face challenges in managing their time due to various distractions and obligations that interfere with their academic goals. As a result, they may fall behind and compromise their academic outcomes. The purpose of this study is to determine whether time management has a beneficial or negative effect on students' academic achievement. Additionally, it will aid in locating the areas where students may enhance their time-management

abilities and make better use of their time (Noftle, Robins, & Richard, 2007) [32]. There is no one-size-fits-all method for effectively managing one's time, but it is crucial to be aware of one's personality and preferences in order to choose how to spend one's time. Additionally, this subject has received attention and discussion in a number of venues related to the provision of educational services, and efforts have been made to assess and comprehend the time and time management attitudes and behaviours of students in educational institutions (Denlinger, 2009) [5].

**Methodological aspects**

**Task prioritization**

Task prioritization is the process of organizing tasks by order of importance so that you can complete the most urgent or important tasks first. Prioritizing tasks can help you meet deadlines, better utilize scarce time and team resources, and effectively manage your workload.

Steps to prioritize tasks effectively at work:

1. **Create a to-do list:** Organize all the tasks you need to complete in one place, such as a notebook, an app on your phone, or a task backlog in project management software. This will help you identify top priorities and keep track of project progress.
2. **Categorize tasks with help of the 4Ds of time management:** One way to manage your time more effectively is to use the 4Ds of time management. This is a method that helps you sort out your tasks according to their importance and urgency. The 4Ds stand for: Do, Defer, Delegate, and Delete.
  - **Do:** These are the tasks that you need to do right away,

because they are important and urgent. They have a deadline or a consequence if you don't do them. For example, finishing a report for your boss, paying a bill, or attending a meeting.

- **Defer:** These are the tasks that you can postpone to a later time, because they are important but not urgent. They don't have a pressing deadline, but they still contribute to your goals or values. For example, planning a vacation, reading a book, or taking an online course.
  - **Delegate:** These are the tasks that you can assign to someone else, because they are not important but urgent. They have a deadline, but they don't align with your strengths or priorities. For example, booking a flight, ordering supplies, or answering emails.
  - **Delete:** These are the tasks that you can eliminate from your list, because they are not important and not urgent. They don't have any benefit or value for you or others. For example, browsing social media, watching TV, or playing games.
3. **Prioritize tasks using Eisenhower Power Matrix:** A simple and effective way to prioritize your tasks is to use a matrix that divides them into four categories based on their urgency and importance. The four categories are: Urgent and important, Not urgent but important, Urgent but not important, and Not urgent and not important. By using this matrix, you can identify the tasks that require your immediate attention and the tasks that can be scheduled, delegated or eliminated. This will help you manage your time more efficiently and achieve your goals faster.

	URGENT	NOT URGENT
IMPORTANT	DO IT NOW	DECIDE WHEN TO DO IT
NOT IMPORTANT	DELEGATE IT	DELETE IT

**Fig 1:** Eisenhower Power Matrix

4. **Prioritize project tasks with help of the MoSCoW method:** A common technique for prioritizing project tasks is to use the MoSCoW method. This method assigns each task to one of four categories: Must have, Should have, Could have, and Won't have. By doing this, you can clearly distinguish which tasks are critical for the project outcome, which tasks are desirable but not necessary, which tasks are optional and can be done if there is enough time and resources, and which tasks are out of scope and should be excluded from the project plan.
5. **Prioritize using relative priorities:** This method involves comparing two or more tasks and deciding which one is more important. You can use this method when you have multiple tasks that are equally urgent and important.
6. **Focus on the most important tasks of the day:** Identify the most critical work that needs to be done today and focus on completing it first.

7. **Do the most difficult task first:** Tackle the most challenging task first when you have the most energy and focus.
8. **Prioritize using the Pareto principle:** The 80-20 rule, also known as the Pareto principle, is a powerful tool for time management. It suggests that 20% of your actions will produce 80% of your outcomes. By identifying and focusing on the most important and effective tasks, you can achieve more with less effort and stress. The Pareto principle can help you optimize your personal and professional productivity and performance. You can use it to prioritize your goals, plan your schedule, delegate your work, and evaluate your results.
9. **Review & revise task priorities:** Regularly review your task list and revise priorities based on changing circumstances.

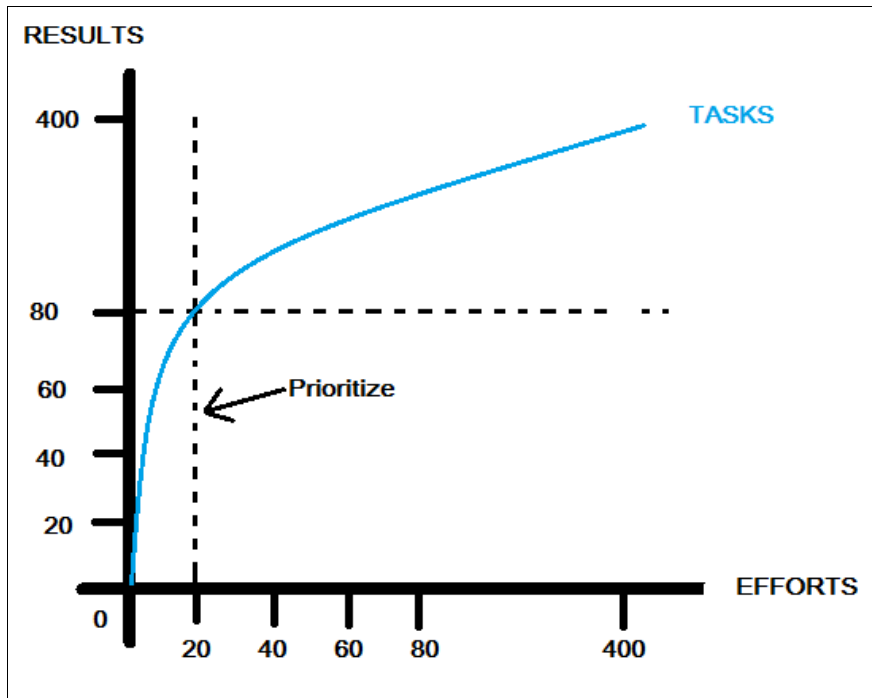


Fig 2: Eisenhower Power Matrix

To achieve your goals, you need to distinguish between what matters and what doesn't. Studies have found that people often choose tasks with shorter deadlines - even if those tasks are not the most important or valuable. To avoid this mistake, plan ahead for important tasks and allocate more time than you think you need to finish them. Identify the most essential aspects of important tasks and find ways to make steady progress. Expect feelings of anxiety that may arise when working on more important tasks and prepare yourself to cope with them. Spend less time on unimportant tasks and prioritize actions that will reduce their number in the future. Finally, pay attention to things that help you see the big picture, whether it's travel, catching up with friends or family members, or time-tracking exercises.

**Priority illustrations**

A summary of the students' perceived priority of their main activities is presented below:

The students most important considered their daily activities as follows:

1. Educational Activities: First Importance
2. Social Media: Second Importance
3. Sleeping/Rest : Third Importance
4. Eating and Drinking : Fourth Importance
5. Travelling: Fifth Importance
6. Grooming : Sixth Importance
7. Others : Seventh Importance
8. Leisure and sports : Eighth Importance
9. Working for job related activities : Ninth Importance

According to the students' perception, the most important activity they engaged in was related to their education, which accounted for 27% of their time. The next most important activity was using social media, followed by sleeping/resting. The students gave the lowest priority to their job-related tasks. This shows that the students valued their education above all other aspects of their lives.

Table 1: Short sample survey of time spent in different activities

Daily Activities	Extent of time Allocation				
	0 hours	1-5 hours	6-10 hours	11-15 Hours	More than 15 Hours
Educational time	0	3	7	0	0
Socializing with friends (Informal)	0	0	10	0	0
Socializing with teachers (formal activities)	0	4	6	0	0
Exercise, Sports	7	3	0	0	0
on campus works	0	10	0	0	0
Off Campus works	0	2	0	4	4
Official Work	7	3	0	0	0
Entertainment time	4	6	0	0	0
Social Media	0	1	9	0	0
Lazier time	0	1	6	3	0

The table summarizes how students allocated their time for different activities in various time intervals. The intervals were: Never, 1-5 Hours, 6-10 Hours, 11-15 Hours and more than 15 Hours. The activities included studying, social

media use, communication with teachers and friends, physical exercise, campus and off-campus activities, television watching and daily rest. The main findings were:

- Most students (80%) spent 6-10 hours per day on

- studying, while the rest (20%) spent less than 6 hours.
- Most students (80%) spent 1-5 hours per day on social media use, while the rest (20%) spent more than 5 hours.
- Most students (80%) spent 1-5 hours per day on communication with teachers and friends, while the rest (20%) spent 6-10 hours.
- Almost none of the students had regular physical exercise, and only 20% of them spent 1-5 hours per week on it.
- All students spent 1-5 hours per day on campus activities, but off-campus activities varied widely. More than 80% of the students spent more than 11 hours per day on off-campus activities, while the rest (20%) spent less than 11 hours.
- Half of the students did not watch entertainment at all, and the other half watched it for 1-5 hours per day.
- All students used social media tools for 1-5 hours per day.
- Most students (80%) rested for 6-10 hours per day, while the rest (20%) rested for less or more time.

The study revealed that studying was the first priority for most students, as they allocated more time for it than any other activity. However, the study also showed that students lacked physical exercise and had high exposure to social media and off-campus activities.

### Predictive Analytics

In the context of a time management system refers to the use of historical data and statistical algorithms to forecast future patterns, behaviors, or outcomes related to how individuals or teams manage their time. This approach can provide valuable insights and help users make informed decisions about how to allocate their time more efficiently and effectively. Here's how predictive analytics is applied to a time management system:

1. **Data Collection:** The first step involves collecting relevant data. This data could include information about tasks, projects, deadlines, work patterns, time spent on various activities, and possibly external factors that might impact time management (like holidays or meetings).
2. **Data Preprocessing:** Raw data usually requires cleaning and preparation before analysis. In order to do this, duplicate information needs to be removed, missing values need to be handled, and some data needs to be transformed into a suitable format for analysis.
3. **Feature Selection/Extraction:** To make predictions, the system needs relevant features or variables from the collected data. This might include factors like task complexity, historical completion times, priority levels, and any other factors that can influence time management.
4. **Model Selection:** Various predictive models can be employed, such as linear regression, decision trees, random forests, or even more advanced techniques like neural networks. Models are chosen according to the complexity of a problem and the nature of the data.
5. **Training:** The selected model is trained using historical data where the outcomes (time taken for task completion) are known. The model learns the relationships between the features and the outcomes

during this phase.

6. **Validation:** After training, the model's performance is assessed using validation data that it hasn't seen before. This step helps ensure the model's predictive accuracy and generalization to new data.
7. **Prediction:** Once the model is trained and validated, it can start making predictions based on new input data. For example, if a user enters details about a new task or project, the system can predict how long it might take to complete based on historical patterns.
8. **Feedback Loop:** As users interact with the system and provide feedback on the accuracy of predictions (whether tasks took more or less time than predicted), the system can continuously refine its predictions and improve its accuracy over time.
9. **Visualization and Insights:** The predictions and insights derived from the predictive analytics process can be presented to users through visualizations, dashboards, and reports. This allows users to see trends, identify bottlenecks, and make informed decisions about their time management strategies.
10. **Adaptation and Learning:** Over time, the system can adapt to changes in user behavior, work environment, and other variables. It can learn from both successes and failures to refine its predictive capabilities.

Predictive analytics in time management systems can help individuals and teams optimize their workloads, set realistic expectations, allocate resources more effectively, and ultimately improve productivity and efficiency. Whatever, it is very important to remind that while predictive analytics can show important insights, it's not infallible, as there are always unpredictable variables that can impact time management.

### 3. Technological Extension

#### 3.1 Integration of Time Management and Machine Intelligence

1. **Significance of Time Management and Machine Intelligence:** Time management, bolstered by machine intelligence, holds a pivotal role in optimizing productivity, streamlining task execution, and fostering a balanced work-life equilibrium. By amalgamating effective time management strategies with machine intelligence, users gain the potential to achieve objectives with heightened precision.
2. **Integrated Application Features**
  - **Machine-Enhanced Task Prioritization:** The application's dynamic task prioritization leverages machine intelligence, allowing users to allocate urgency and importance levels. Through this intelligent system, users can decipher tasks demanding immediate attention and those conducive to later action, thereby combating procrastination.
  - **Intelligent Alarms and Proactive Notifications:** By harnessing machine intelligence, the application's alarms and notifications anticipate users' scheduling needs. These advanced alerts prompt users at optimal intervals and predict upcoming deadlines, maintaining focus and reducing the risk of tasks slipping through the cracks.
  - **Adaptive Timers Driven by Machine Intelligence:** The embedded timers, powered by machine intelligence, empower users to allocate precise time

intervals for tasks. This fusion promotes heightened awareness of time allocation and enhances adherence to timeframes, aiding in thwarting procrastination tendencies.

- **Synergizing Machine Intelligence and Notification Systems:** The notification system is enriched with machine intelligence, offering refined customization based on users' preferences. This ensures timely reminders, resulting in focused task execution and relieving users of the stress associated with remembering multiple commitments.
3. **Enhanced Benefits from the Synergy**
- **Augmented Task Management through Machine Intelligence:** The application, augmented by machine intelligence, empowers users to adeptly organize, schedule, and prioritize tasks. This holistic approach amplifies productivity and instills structure in work methodologies.
  - **Amplified Accountability through Machine-Driven Time Management:** Machine intelligence, combined with task priorities and deadlines, instills a sense of ownership. Users are motivated to achieve tasks promptly, fostering a greater sense of accomplishment and responsibility.
  - **Stress Mitigation via Machine-Enhanced Reminders:** The application's notification system, enriched by machine intelligence, gently eases the

burden of task recollection. This amalgamation enables users to focus on present tasks without the anxiety of neglecting crucial obligations.

4. **Future Prospects: A Synergistic Path Forward** The future of the application involves deepening the integration of machine intelligence:
- **Advancing Machine Learning for Personalized Time Allocation:** The application can evolve to learn individual preferences and habits, enabling even more accurate time allocation recommendations.
  - **Harnessing Big Data for Insightful Time Analytics:** Leveraging machine intelligence to analyze extensive user data could provide profound insights into time management patterns, fostering continuous improvement.
  - **Cognitive Collaboration:** Integrating machine intelligence into collaborative features can facilitate smarter task delegation and more effective teamwork within the application.
  - **Predictive Insights for Enhanced Planning:** By harnessing the predictive capabilities of machine intelligence, the application could anticipate future workload spikes, helping users proactively allocate time and resources.

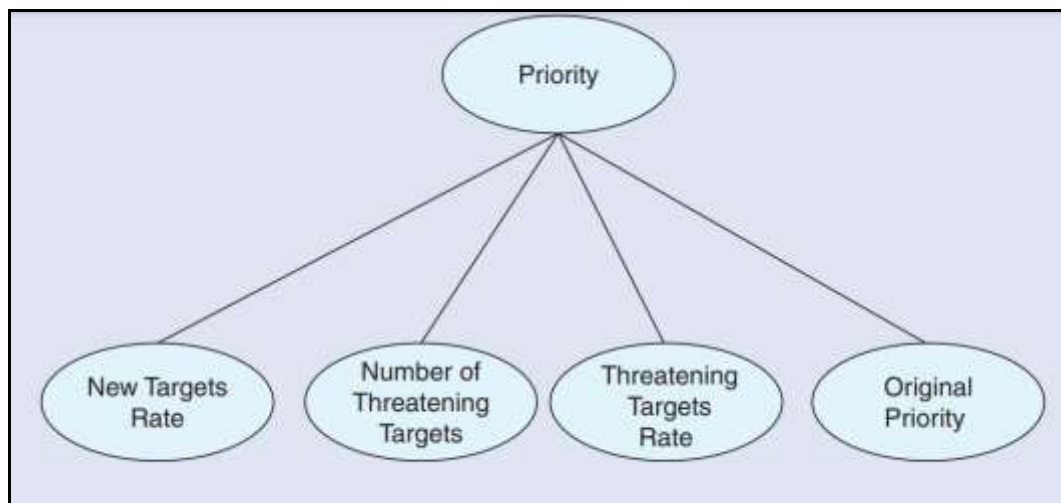


Fig 3: Decision tree for sectors of surveillance priority assessment.

- **Automated Time Refinement through Machine Learning:** The application's predictive capabilities can evolve to an extent where it learns from user behavior and adjusts suggested time allocations. This iterative learning process refines time management strategies over time, ensuring an ever-improving alignment with users' work habits and preferences.
- **Smart Task Recommendations:** The application could proactively analyze users' task history and patterns to offer intelligent task recommendations. Machine intelligence could identify recurring tasks, similar tasks, and task dependencies, aiding users in optimizing their to-do lists and schedules.
- **Integration with Smart Environments:** The application's integration with smart home and office environments could further enhance time management. Imagine the application adjusting task notifications and

reminders based on users' location, activity, and context, providing a seamless and dynamic time management experience.

#### 5. **Voice Assistant**

- **Voice Assistant Integration:** The inclusion of a Voice Assistant accentuates the user experience. This interactive companion, powered by natural language processing and machine learning, engenders hands-free task management. Through voice commands, users can effortlessly navigate task lists, set priorities, allocate time, and receive reminders, adding a layer of convenience and accessibility.

#### 6. **Recommendations for Further Enhancements**

- **Integration with Calendar:** Integrating the application with existing calendar applications (e.g., Google Calendar) would allow users to have a comprehensive overview of their schedules and combine personal and

professional commitments seamlessly.

- **Data Analysis:** Implementing data analysis features would provide users with insights into their time management patterns. This could include visual representations of productivity trends, time spent on various task categories, and identification of potential time-wasting activities.
- **Collaboration Features:** Introducing collaborative features would enable users to delegate tasks or work on shared projects within the application. This would facilitate better teamwork and improve overall efficiency in managing multiple tasks.

The field of intelligent traffic management using machine learning has gained significant attention in the past few years. The advanced machine learning algorithms like deep learning use strategies that are based on data-driven learning. The algorithms will be able to extract information from the data by analyzing complex layers of structure or by using a variety of nonlinear transformations to abstract the information. McKinsey & Company suggests that operationalizing machine learning in processes involves applying DevOps concepts to operationalize machine learning. Probabilistic automation solutions use statistical functions to predict output based on trained behavior (“If A, then most probably B”).

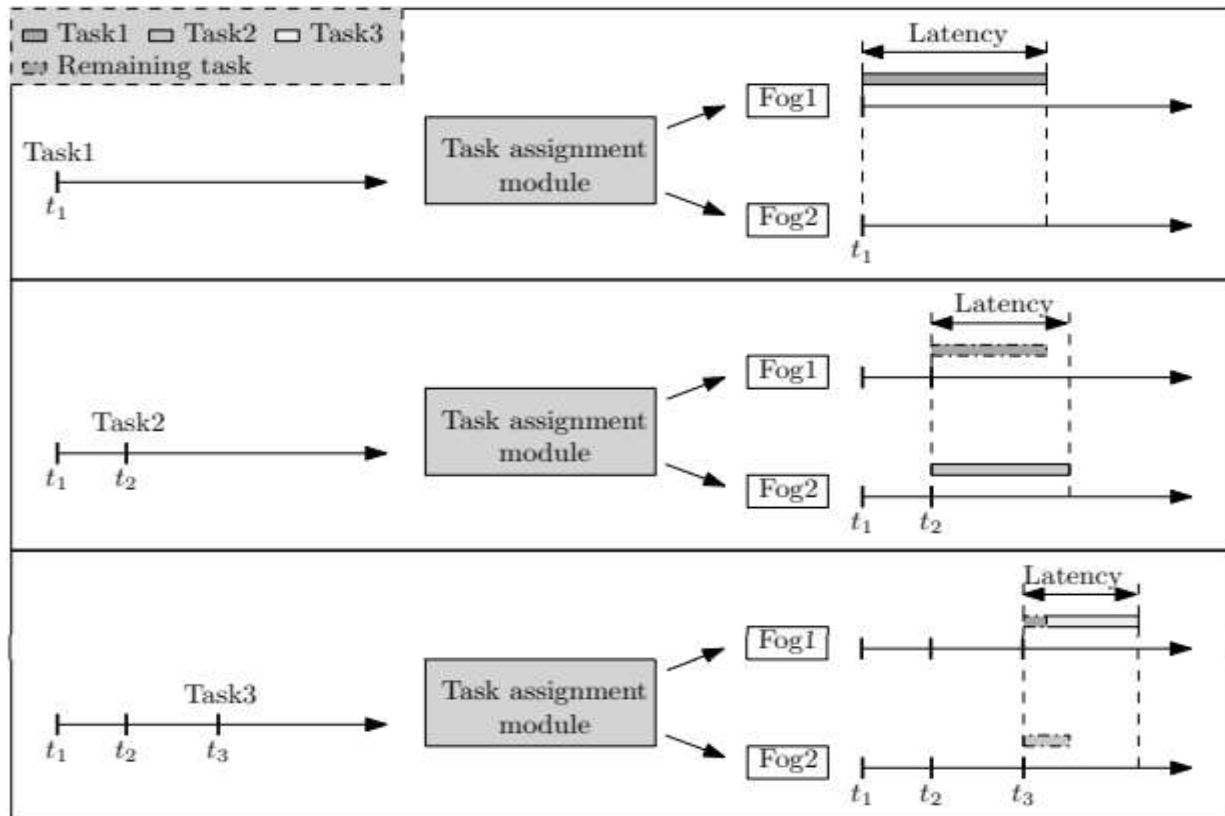
Harvard Business Review recommends managing AI decision-making tools by ensuring that they are transparent, explainable, and auditable. Micro-decisions require some level of automation, especially real-time and high-volume decisions.

**Algorithm**

The algorithm step by step for the process of auto-generating a time-oriented task list based on user input and

AI assessment. This algorithm leverages predictive analytics to assist with time management:

1. **User Input Gathering:** Collect the user's to-do list, which includes tasks and their corresponding expected completion times.
2. **Data Preprocessing**
  - Clean the user's input data, handling any inconsistencies or errors.
  - Extract relevant features from the tasks and their expected times, such as task names, expected durations, and any other contextual information.
3. **AI Model Selection**
  - Choose an appropriate predictive model for time estimation. This could be a regression model, such as linear regression, or more advanced techniques like decision trees, random forests, or neural networks.
4. **Data Extracting**
  - Split the previously processed data into review and validation sets to assess the model's performance.
5. **Model Training and Validation**
  - The selected AI model is trained on the training data, where the features are the task descriptions, and the labels are the expected completion times.
  - Validate the model's accuracy using the validation set to ensure it generalizes well to new data.
6. **User Input for New Task**
  - When a user inputs a new task and its expected completion time, feed this information into the trained AI model.
7. **AI Assessment**
  - The AI model predicts the time required for the new task based on its trained knowledge of historical data and patterns.



**Fig 4:** Task Assignment Overview

**8. Generate Task List**

- Rank the tasks in the to-do list based on their predicted completion times. Arrange tasks in ascending order of predicted time to create a time-oriented task list.

**9. Visualization and Presentation**

- Present the generated task list to the user through visualizations or a user-friendly interface. This could be in the form of a chronological list or a schedule.

**10. User Feedback and Interaction**

- Allow the user to interact with the generated task list, making modifications if needed. Users can adjust priorities, reorder tasks, or provide feedback on the predicted completion times.

**11. Refinement and Learning**

- Incorporate user feedback to refine the AI model over time. The model can learn from the differences between

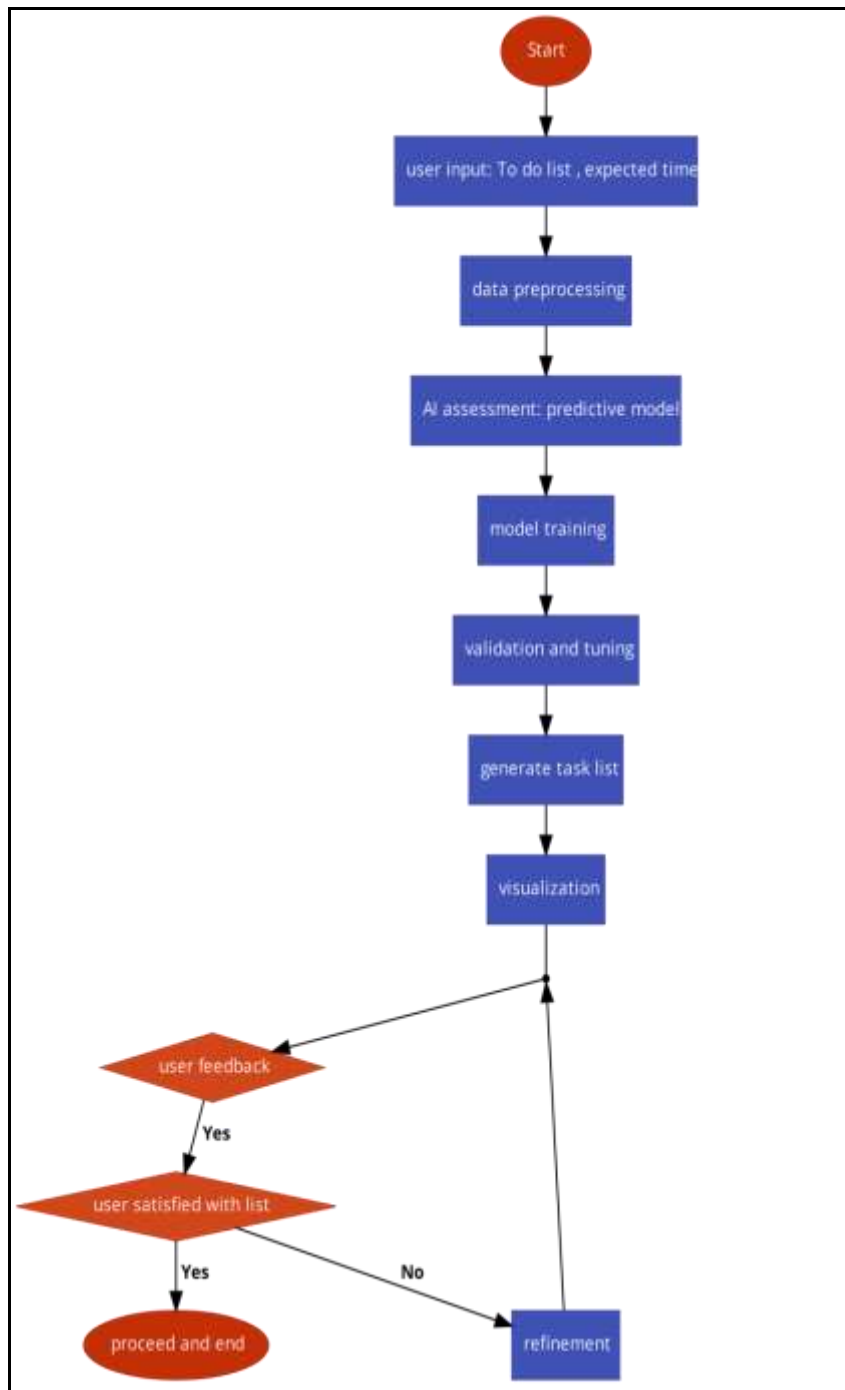
predicted and actual completion times, improving its accuracy for future predictions.

**12. Iterative Process**

- The algorithm operates in an iterative manner, continually updating the AI model and task list based on new user input, feedback, and refined predictions.

By following this algorithm, the time-oriented task list generated by the AI becomes more accurate and tailored to the user's preferences and work patterns over time. Keep in mind that the success of the algorithm is depended on the quality and diversity of the historical data, the chosen predictive model, and the user's active engagement in providing feedback and adjustments to the task list.

Following the flow chart of the proposed System



**Fig 5:** Flowchart of System Diagram



## Conclusion

The goal of this proposed research is to define tasks, build and deploy systems, test and refine them with an appropriate prioritized structure utilizing Machine Intelligence production rules. Implemented with all its features, the work can largely benefit people from various spheres of the society. This work's reach is diverse, encompassing students, professionals, and entrepreneurs. The parameters such as difficulty level in keeping track of assignments and deadlines, lack of flexibility and customization, and time demanding manual tracking are taken into account in the problem model formulation.

This is supported by market research to better understand the needs and preferences of potential system users. Surveys are also used to gain input on system prototypes and enhance system design. Performance indicators such as managing tasks-deadlines-schedules, adjustable options for different sorts of tasks-priority levels-alerts, developing automatic tracking and reporting features are all taken into account during the solution process. In designing the system with wireframing and time zone support, the primary dataset based on the survey and popular datasets are employed. Using an Android extension, the incorporation of a voice assistant is also considered.

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