Dynamic Event Management using Python

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*Abstract:*From achieving milestone and celebrating happiness to any gathering for sad moments or social awareness, it takes place in any human's life.Management of all events is imperative. All events need to be planned, categorized, analyzed and acted upon in real-time fashions. This paper presents the concept of planning system which is a new approach to any event management method present. It focuses on a procedure about planning things in a particular budget and actions to be taken based on the event nature and information available.Here companies will add their products and customer will directly be able to book and deal with them A guideline like structure is also provided with the help of recommendation system. This system is implemented using neural network algorithm in machine learning. Suggestions will be given based on choices and history of the customer with the system.

IndexTerms - Independency, Decorator, Budget, Status, Booking

1. INTRODUCTION

India is country of festivals and celebrations, people search for the opportunities for celebrations. One thing that people find intimidating about celebrating any function is the vast array of how entertaining, comfortable and exciting can they make it. Generally, these are often handled by outsiders and they take up a lot of money. Sometimes people agree to pay by crossing their hearts for bigger functions but for smaller functions it is very obvious that everyone cannot afford to pay that much. So, instead of giving huge amount of money to the managers, through my web-app a person can himself or herself book or buy any requirement. The main purpose of Milestone Ministration is of helping you orgaize, guide through and manage events in a human's life. This paper focuses on making every event easier to execute and easy to access.

In the existing system, the person has to visit a particular office for enquiry. The Event managers need to keep records of events manually or in their smart gadgets. It consumes lot of time of user. Paper work results in a lot of space to keep the data. There are online platforms also like sulekha which is similar to yellow pages that provide you with possibilities available. But these platforms fail to give you real-time service. You can get calls of event organizers or owners which is quiet disturbing because you don't know about the particular place or requirement. Additionally, there are no features for budgeting even on google.

In the proposed paper, anyone can plan any event in their own way. There is no third-party interference. A person can himself or herself book a requirement for any smaller or bigger milestones in their life. Here, there are various modules dealing with managing events information, organizing events, selecting budget, recommendations, managing services, customer login, e-card creation, status check and reminders which are essential business software and therefore it provides the desired functionality defined by the set of requirements. This helps to build good communication between user and owner by knowing details. So, this project provides a self-control over celebrating milestones or having a gathering for social or grief-stricken moments in your life. Just like Zomato/Uber Eats, you get to explore with real-time options with pictures, reviews and details. You can plan in your free time or even play to explore things around you for future. The main aim is to make and provide an ideal software solution to provide information access and self-control to save time and protect data. It can be accessible from any place. It gives a virtual outlook from the beginning about how the outcome will be.

Guiding here is made possible through machine learning concepts which can help any naïve or experienced person to work efficiently. When people are booking, popups will be given on recommendation, suggesting them with the ideas of the possibilities. They will be able to filter requirements according to budgets. This will help in a way that if a person is booking for the first time, then he/she will know the flow of how the things work. And once the requirements are executed, the information will be remembered. So, when the customer login again, customer will get suggestions on the basis of previous purchase as well.

2 Literature Survey

Prior state of art reveals some rich work on recommender systems.[8] The main goal here is to generate meaningful recommendations to users for items or products that might regard them and might influence them on using. Suggestions for shows on Netflix, or things on Amazon, are real world examples of the operation of recommender systems. The design particularly depends on the domain and the characteristics of the data available. Based on the data available the recommendations are given for facilitating or influencing the user. Thecollaborative filtering systems analyze historical interactions alone, while Content-based Filtering systems are based on profile attributes; and Hybrid techniques attempt to combine all these designs.

Various research techniques have been proposed on event management systems. One such researcher has proposed a system using AOP methodology in JAVA. [5] Here, as a customer contacts the company for event management the managers shows the application which have different tasks of planning, scheduling and conducting the event by providing instant access to information. There is use of application on company side to show and store data. Thus, resources are efficiently and economically utilized. The system is extensible. New functionalities can be added to the system, whenever it is needed due to changing requirements. But this doesn't facilitate the users.

Another similar system has been developed to override the problems prevailing in the practicing manual system. [7] This software is supported to eliminate and, in some cases, limit the hardships faced by the system used for showing and storing data. The application is made to reduce errors as much as possible. It also notifies when putting invalid values. No formal knowledge is needed by the user to use this system. Event organizations whether big or small, has to face such challenges. The aim is to automate the manual system of event managers with the help of full-fledged computer software and computer equipment, fulfilling the requirements so that the data/information can be stored for longer period of time with easy access and manipulation of the same.

Same way Gainesville et.al. has filed a patent on their proposal of event management system.[8]Their system uses a microcomputer with CAD/DATA station and DATA stations for computer homogeneous event management system that synchronize the entire process of planning and implementation. It includes a fully relational database and a CAD module which are connected together using a third module such that, whenever a piece of information is changed in one place, automatically it is changed everywhere and is stored in the database. It translates information from a database format into a graphic format readable by CAD software packages as well as translating the graphic information back into the database information. This system is used by hotels and entertainment providers comprising, a first digital data processor for storing text information relating to the requirement and the events to be held at that requirement; a second digital data processor which is connected to first for producing and storing computer aided design drawings using the information stored in first.

Another patent filed by Phillips et.al. portraits event revenue management system. [4] This invention provides a revenue management system that calculates event costing to manage revenue and to maximize profit from the requirement. In particular, the system uses requirement parameters and initializes forecasting parameters. The system aggregates historical data using these parameters to generate initial forecast statistics, taking into account the parameters. These includes timing, resource, and discount categories wherein the forecasting parameters comprises of creating a matrix having entries for each combination of said criterias such that each row of the matrix is an allowable combination of each discount category, and wherein said timing categories comprising past, present and future timing categories. It does gives you a lot of flexibility and revenue management is integral part of every management system. This can be used by any organization.

Sr no.	Survey topics\ facilities→	Type of website	Third Party	Options possible	Recommendation	Cloud Storage
1	**Milestone Ministration**	**dynamic**	**No**	**Not limited**	**Yes**	**Yes**
2	AOP based Event Management Systems [5]	static	Yes	Limited	No	No
3	Event Management System[7]	static	Yes	Limited	No	No
4	Event Management using CAD [8]	static	Yes	Limited	No	No
5	Revenue Management System. [4]	static	Yes	Limited	no	No

Existing research and patents	Features of the existing system	Improvements in this research paper
AOP based Event Management [5]	It helps event managers to have an easy access and presentable format of their data.	Customers can directly have access to the format and can choose at their comfort level
Event Management System [7]	It helps the event managers to manage resources.	All resources are managed at a single place and are categorized according to fields like budget and recommendations.
Event Management using CAD [8]	It helps to depict any event graphically and statistically	Statistics are managed securely and images and reviews are presented for better depiction.
Revenue Management System. [4]	It calculates any event's costing to manage revenue and to maximize profit	This theory will be used to analyze the costing and have discount patterns.

3. Implementation

This manuscript is going to be implemented using Python [9] [10]as Backend Technology with the help of some concepts of machine learning, bootstrap, HTML, CSS, JQUERY and AJAX as Frontend Technology, Eclipse, My SQL, Django Framework [6], Sublime as Frontend Tools and software interfaces. It can run on any operating system on any browser and requires an Internet Connection. The flow of this system is depicted in the following diagram. The diagram is created using creately[1] .
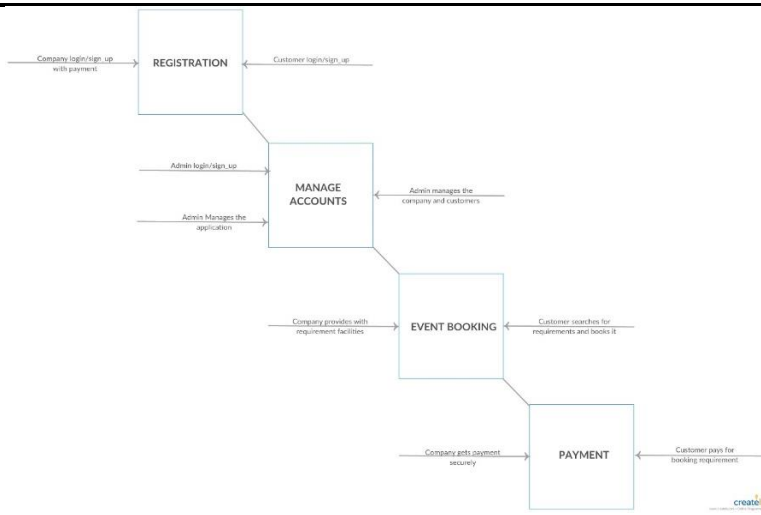
Figure3.1 Block diagram

This proposed system comprises of four modules: Registration, Admin, Event Booking and Payment. Admin is responsible for verifying company/customer details and he/she is given rights to modify their details. Figure 3.1 shows the flow of information within these modules.

Registration moduleis concerned getting Customers, Company and Admin registered within the application. Here, a person can login, if already having an account or can sign up for a new one. If it is company owner or some other requirement provider then he/she might have to pay for providing each requirement. If he/she is a visitor then can skip this step and he/she will still be able to explore requirements.

Manage Accounts module deals with showcasing how the admin manage accounts by adding update or managing companies and customer etc. Here, the details of admin are stored. He can add update, accept the company's request and add it to his/her website, go through the feedbacks, and also can add/remove company/customer.

Event Booking module deals with requirements of events. As company projects details of requirements and facilities, customer can browse through categories. User can select budget frequency according to his/her comfort level and can select dates for checking the availability of respective requirement preferences. Then he can browse through categories. User can surf through given variety of options and select according to his/her needs or save them in wish list. User can book, pay or add to cart. User can also communicate with their respective representatives. As user confirms booking, a confirm message will be sent to company. Company can update or add the requirements. Company updates and checks the status or the progress of the order and simultaneously the customer is informed. Company add the details of the employees which ensure transparency between both sides. If it is an order which needs to be shipped then the process will commence and customer will be updated accordingly.

Payment module is deals with secure transaction of money. customer will be allowed to pay through net banking or with cash when he meets the representatives face to face and company will receive money from the customer. Customer will be able to give feedback on the basis of his personal experience. Customer gets updated about his events by setting remainder for functions, meeting etc. he can also save list of his invites and save their tickets here.

4. Experiment

This experiment is performed with the concepts of machine learning. In this experiment two datasets created depicting product_id and ratings given by customer. Recommender system concepts are applied with the help of anaconda[14]as a text editor and base language as python. The recommendation score is generated which suggest which product must be recommended to a customer on the basis of ratings given by the customer itself. It is depicted below in table 3.1 and table 3.2. The graph plots these details in a representative manner.

	Product_ID	Name	Theme	Color	List Index	Recommendation Score
0	1	curtains	pastel	peach	0	0.008409
1	2	curtains	traditional	red	1	0.017850
2	3	curtains	modern	white	2	0.058261
3	4	curtains	horror	black	3	0.005785
4	5	curtains	professional	grey	4	0.012664

table 3.1

	Product_ID	Name	Theme	Color	List Index	Recommendation Score
17	18	LED lights	modern	white	17	0.073266
5	6	artificial flowers	pastel	peach	5	0.066401
2	3	curtains	modern	white	2	0.058261
22	23	pastries	traditional	red	22	0.056158
11	12	real flower	traditional	red	11	0.054813

table 3.2
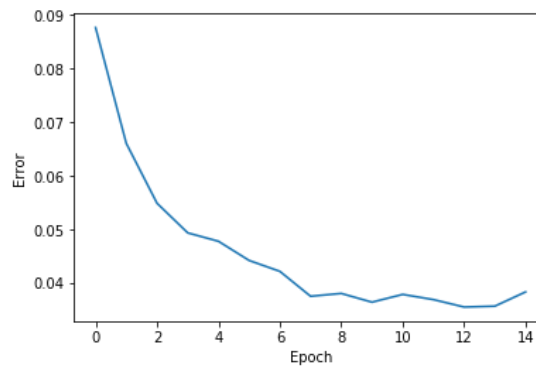
graph 3.1

5. Conclusion and Future scope

In this manuscript, we have proposed a system that is easily accessible and gives you abundance of ideas about how to propose and plan any event.

i. Helps customer to be independent of his/her choices without getting manipulated.

ii. It helps customer have direct approach to the requirements at their own comfort level.

iii. Categories are provided step by step to help in choosing a specific requirement, in specific budget, with specific discount and payment method, etc. to help the customer to book and order any requirement with a relief.

iv. Images and details are presented by the company to present their provided facilities which helps customer to have virtual image in mind about how the requirement will be.

v. All resources are managed at a single place. A database created specifically for catering, invitees, e-card numbers, tickets, decorations, pending tasks, etc.

Further, I plan to incorporate following things in future:

i. Visual three-dimensional effect to be added using concepts of Image processing. Using this feature a person can upload picture or frame of venue and decorations will be directly placed on frame provided.This gives customer a better idea of how everything will look together after decoration or placements. It can give a virtual effect of how things will look in future.

ii. Different services will be added according to the trend for example, some people love to have entries with huge cranes and helicopter on their special day. So, we can add this provision once our web-app gains popularity and acceptance.

iii. Provision to add different companies and organizations will be added so that this application is not just limited to single place but also can be used worldwide and the currency converters will be designed and added in order to convert the different currency rates.

iv. We will even try to add luxurious venues for destination weddings and can even add flight and hotel booking in here by having synchronous relationship with popular booking apps or might include our own.

5. References

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