Real Time Admission Status Dashboard for Higher Education Institutions in India

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***Abstract*—This paper addresses the issue of admission status ambiguity during the centralized admission process. It reveals the process of deploying a unique way of adding transparency to the system which will benefit the prospective students, parents, admission team and even the management officials. This paper shows an innovative method of displaying the admission allocation and actually admitted students on the Institute website. In Maharashtra, the higher education Institutes admit students through Centralized Admission Process which is conducted by Government of Maharashtra. On the MH CET admission website, the list of allotted students to the Institute is available. There are few admission rounds conducted during the whole process where students get the chance to take admission in the allotted college or to opt for betterment. Some of the seats are available for Institute Level Admission. For these seats also the merit list needs to be displayed based on which the seats in each branch are filled. During this process, Parents and students have to visit various institutes for checking the seat availability in the institutes of their choice. The admission team in every college also have to face certain challenges such as completing the student registration, fees payment etc. including other formalities. This paper attempts to create a web portal which works as Admission Indicator for a particular institute. It displays a number of seats allotted for every branch. It also gives a real time tracking to the students and parents to check how many seats are filled and the count of vacant seats. This Indicator display will help all stakeholders in decision making thereby reducing ambiguity and confusion.**
The website is created using Gradio App and the backend coding is done in python. The GUI is made responsive thereby choosing the elements and shapes carefully with the help of CSS.

***Index Terms*—Real Time Admission Count Indicator, Gradio, GUI, Python.**

I. INTRODUCTION

This paper deals with creating an alternative other than enquiry for prospective students and parents. This paper explains the challenges and methods to display the real time count of admission being done. This interface will be accessible from an institute website which will help adding transparency to the admission process thereby reducing ambiguity, confusion and frustration among students. The paper attempts to create a real time admission indicator web portal which will display the count of admitted students, availability of vacant seats etc. This will be beneficial to students, parents, officials and admission team for quick responses. This will also help in managing crowd during admission days. The web app is designed using python and Gradio App. The web app is made responsive and attractive thereby adding various elements such as colors, shapes etc. The paper is divided into sections. Section 2 explains the admission process in detail. Section 3 describes the workflow of the web app. Section 3 deals with the results and discusses the lessons learnt and challenges faced during the creation of this app. Section 4 gives the conclusion and future scope.

II. NEED OF REAL TIME ADMISSION TRACKING

India is a country with the highest population of youth. Hence, India has high percentage of students taking admission in higher education institutes. State admission cell conducts a common entrance test every year in Maharashtra to admit students in all state affiliated colleges in Maharashtra. Around 2 Lakhs students registered for this entrance test (MH-CET (PCM) in the year 2025. Out of this, around 1.88 Lakhs students got admitted to institutes after all CAP rounds [7]. The higher demand could be seen for computer allied courses.
These statistics show that there is a rising count of students willing to get admission in higher educational institutes, specifically computer allied engineering branches.

Thus, it becomes practically impossible to answer the queries of students regarding the availability of seats in the institute. This need is being addressed in the paper thereby creating a web interface or app for the real time indication of seat availability, admissions etc.

III. WORKFLOW OF THE ADMISSION APP INTERFACE

The website interface is created using Gradio App. The link of app will be available on the official website of the institute. The website will be consisting of following tabs:

Two modes of operation
Admin Mode- for updating admission seats
User Mode- To see the availability of seats
B. Tech Branch Name (e.g., Computer Engineering, Information Technology etc.)
Count of seats as per sanctioned intake (e.g., 60)
Authentication for administrator to modify details
Tab for incrementing admitted count.
Tab for decrementing admitted count due to cancellation.
Reset tab

IV. DEVELOPMENT OF WEB APP FOR REAL TIME ADMISSION TRACKING

4.1. Web App creation

This app was developed using Gradio website for free [1]. The backend programming was done in python, CSS and JavaScript. The algorithm for app creation is as follows:

Import the Gradio libraries.
Display the data related to total number of sanctioned seats available for an Institute for each branch.
Display the data related to number of seats filled for an individual branch.
Assign various colors to different branches for creating visually appealing interface.
Generate code in html for the above steps.
Create following buttons for updating dashboard.
Add- Increment the count of filled seat and decrement the count of available seat for a branch.
Cancel- For every admission cancellation, decrement the filled seat and increment the available seat count.
Create User Interface using Gradio.
Assign buttons various labels, colors and functions.
Create buttons for increment or decrement the count.
Add Reset Button for starting the admission process for next year.

4.2. Web App Interface

Once This app backend coding is ready, it can be tested and made available on the institute website through a link. When a user will click the link, it will be redirected to dashboard. The admin mode is provided to edit the admitted and cancelled seats. Admin will change the status in real time. The public link is created through Hugging face.

V. RESULTS AND DEMONSTRATION OF APP

5.1. Screen on Reset

The link for this app by Gradio website can be displayed on the institute website. The screenshot of website dashboard is as shown in fig.1

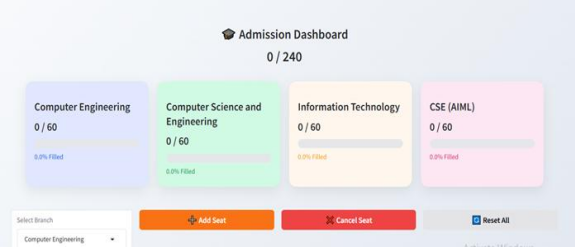

Fig. 1 Dashboard Display on Reset

5.2. Display after adding a seat to a branch

The admin can update the status of admission by clicking on add seat to a particular branch. App will ask to login with authenticated username and password to edit any detail. Fig.2 shows the status after adding 2 seats in Computer branch. Fig.3 shows the dashboard after adding multiple seats.

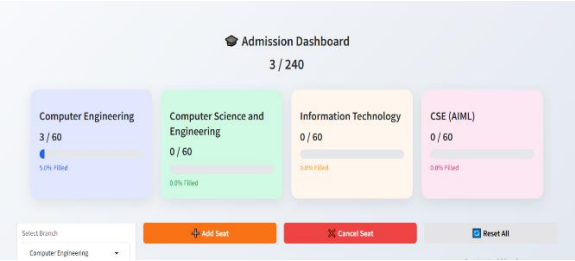

Fig. 2. Dashboard Display after adding a seat to computer engineering branch

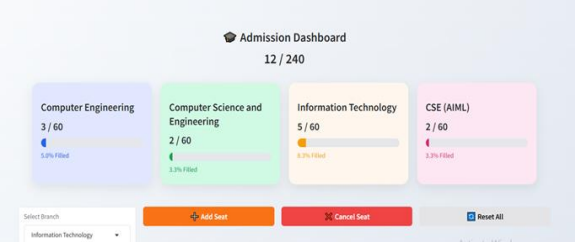

Fig. 3. Dashboard Display after adding multiple seats to various branches

5.3. Display after cancelling a seat from a branch

The admin can update the status of admission by clicking on cancel seat to a particular branch. App will ask to login with authenticated username and password to edit any detail. Fig.4 shows the status after cancelling a seat from Information Technology branch.

Fig. 4. Dashboard Display after cancelling a seat from Information Technology branch

5.4. Display after reset

The admin can reset the dashboard after the completion of admission for current academic year. This facility provides the control to Institute to restart the fresh process for the next session. Fig. 5 shows the reset screen.

Fig. 5. Dashboard Display after reset

VI. DISCUSSION

This paper presents the idea of admission data visualization in elementary form for the ease of parents, students and other stakeholders. This app can be improved further thereby automating the admission process of updation thereby linking it to a google spreadsheet. The web interface can also be improved by adding graphs or visuals for trends in admissions.

VII. CONCLUSION

This paper shows a simple way of creating an interactive dashboard for admission status for higher educational institute. It will be helpful for students to track admissions availability at a specific college for a specific branch. Parents can also use this interface to take an informed decision whether to visit a particular institute before hustling to any institute. Institute administration will be able to fill the vacant seats within stipulated time thereby displaying on dashboard. It will also be useful to manage crowd at a specific institute. This interface was developed in Python using Gradio App and web interface was created using Hugging Face website. The UI design was deployed using CSS. The large language models were used for solving errors encountered.

VIII. FUTURE SCOPE

The future scope for this paper to develop more interactive features to this interface. The app can be improved by automated updation of admission details and adding multiple trends and visualization for visually pleasing and informative display.

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