AICTE APP – AICTE AT YOUR FINGERTIPS

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ABSTRACT

To develop a Mobile Application for the AICTE website to draw out more users and make the interactions between user and AICTE more smooth and pleasant, thus making the AICTE portal more accessible to different users and improving its reach.

Keywords: Flutter, Scalability, Master-Slave Strategy.

I.   INTRODUCTION

With mobile applications entering the realm of educational institutions, students and teachers have achieved new found ways of learning and disseminating information more effectively and efficiently. The goal is to develop a mobile application for AICTE which is a statutory body, and a national-level council for technical education, under the Department of Higher Education. The app will be an adaptation for the pre existing website for AICTE which is a reliable source of information for any updates and information on current schemes , scholarships or courses provided by AICTE.

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Due to the scale of both the data and the user-base, any common approaches to develop an information based application is not useful. The All India Council for Technical Education (AICTE) is a statutory body, and a national-level council for technical education, under the Department of Higher Education.[6] Established in November 1945 first as an advisory body and later on in 1987 given statutory status by an Act of Parliament, AICTE is responsible for proper planning and coordinated development of the technical education and management education system in India.

It is assisted by 10 Statutory Boards of Studies, namely, UG Studies in Eng. & Tech., PG and Research in Eng. and Tech., Management Studies, Vocational Education, Technical Education, Pharmaceutical Education, Architecture, Hotel Management and Catering Technology, Information Technology, Town and Country Planning.

II.   PROBLEM FORMULATION

With mobile applications entering the realm of educational institutions, students and teachers have achieved new found ways of learning and disseminating information more effectively and efficiently.

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One of the vital aspects of this project is to keep in mind the complexity of scaling that comes hand in hand with a well established platform like the AICTE website and the need to keep the website up and running at all times. The path of the project is to keep the website up and running at all times and to keep the website up to date with the latest technologies and the latest trends in the industry.

Scraping the data from the AICTE website in real-time and being able to process and store it in databases is a very important aspect of the project. And not to mention the ability of the app to fetch it from the database and display it simultaneously.

III.   LITERATURE REVIEW

Mobile applications in general are more accessible than viewing in web browsers. Mobile apps are the best solution to give such a vivifying experience right from their comfort. With the exclusive user interface, mobile

apps can leverage its great potential to engage users in multiple ways. mobile applications make it possible for customers in remote locations or with spotty connections to access basic application functions via the software stored on their phone. Mobile applications are way faster than mobile websites. Even a well-groomed and optimized responsive mobile website cannot match with the speed of an app. Both in App and push notifications play a significant role in informing the users with day to day updates published by AICTE. Websites use web-servers to manage requests of all the users of the website. However by employing a Master-Slave approach in the Mobile Applications, optimization can be enhanced significantly.

Limitations:-

The website is not suitable for viewing on mobile and is not user friendly, as it contains nonresponsive links. It also lacks visual aids and has an unorganized way of presentation.

Advantages:-

Website is easily accessible through a web browser and contains all information regarding all affiliated colleges and their provided courses. Websites and Webpages do not consume hard disk storage whereas mobile apps need installation/updates and physical storage.

1. Cross platform compatibility:

Most web based applications are far more compatible across platforms than traditional installed software. Typically the minimum requirement would be a web browser of which there are many. (Internet Explorer, Firefox, Chrome, Safari to name but a few). So whether you use Windows, Linux or Mac OS you can still run the web application.

2. More manageable:

Web application development systems need only be installed on the server placing minimal requirements on the end user workstation. Maintaining and updating the system is much simpler, my client updates can be deployed via the web server with ease.

3. Highly deployable:

Due to the manageability and cross platform support deploying web applications for any platform in any type of work environment is easier. It is ideal where bandwidth is limited and the system and data is remote to the user. At their most deployable you simply need to send the user a website address to log in to and provide them with internet access. Thus it has huge implications allowing one to widen access to various systems, streamline processes and improve relationships by providing access to customers, suppliers and any third parties

IV.   METHODOLOGY

The methodology of the project is to scrape the data from the AICTE website and store it in a database. The data is then fetched from the database and displayed on the app. The app is built using the latest technologies and the latest trends in the industry. The app is built using Flutter and the backend is built with python and beautiful soup. The database used is Firebase cloud firestore and MySQL. The scraper is deployed on heroku.

Scaling of the scraper is done by adapting the best industry standard or rather an ensemble of practices that are used by the best companies in the industry. The scraper uses distributed asynchronous multiprocessing to scrape the data from the AICTE website.

Some application states are needed in many places in the app. To reuse the state flutter redux is used.

In order to implement this entire project we followed below structure:

1) Planning:- planning will involve structuring our idea with detailed technological use and the minimum time required to build a working prototype .

2) Data Preprocessing:- Ensure that the distribution of each class in our data is similar so that the model will not be overfitting on a single class.

3) Training and Experimentation :- We will be experimenting with hyper-parameters to increase the accuracy of the model.

4) Continuous Development:- coding of the software along with planning of each individual stage .

5) Continuous Integration:- Making frequent changes to the code along with unit testing, integration testing, code review, and packaging.

6) Continuous Testing:- continuously testing the developed software for bugs and beta testing it by selecting specific individuals for blackbox testing.

7) Continuous Deployment:- Code is deployed continuously, and configuration management tools play an essential role in executing tasks frequently and quickly.
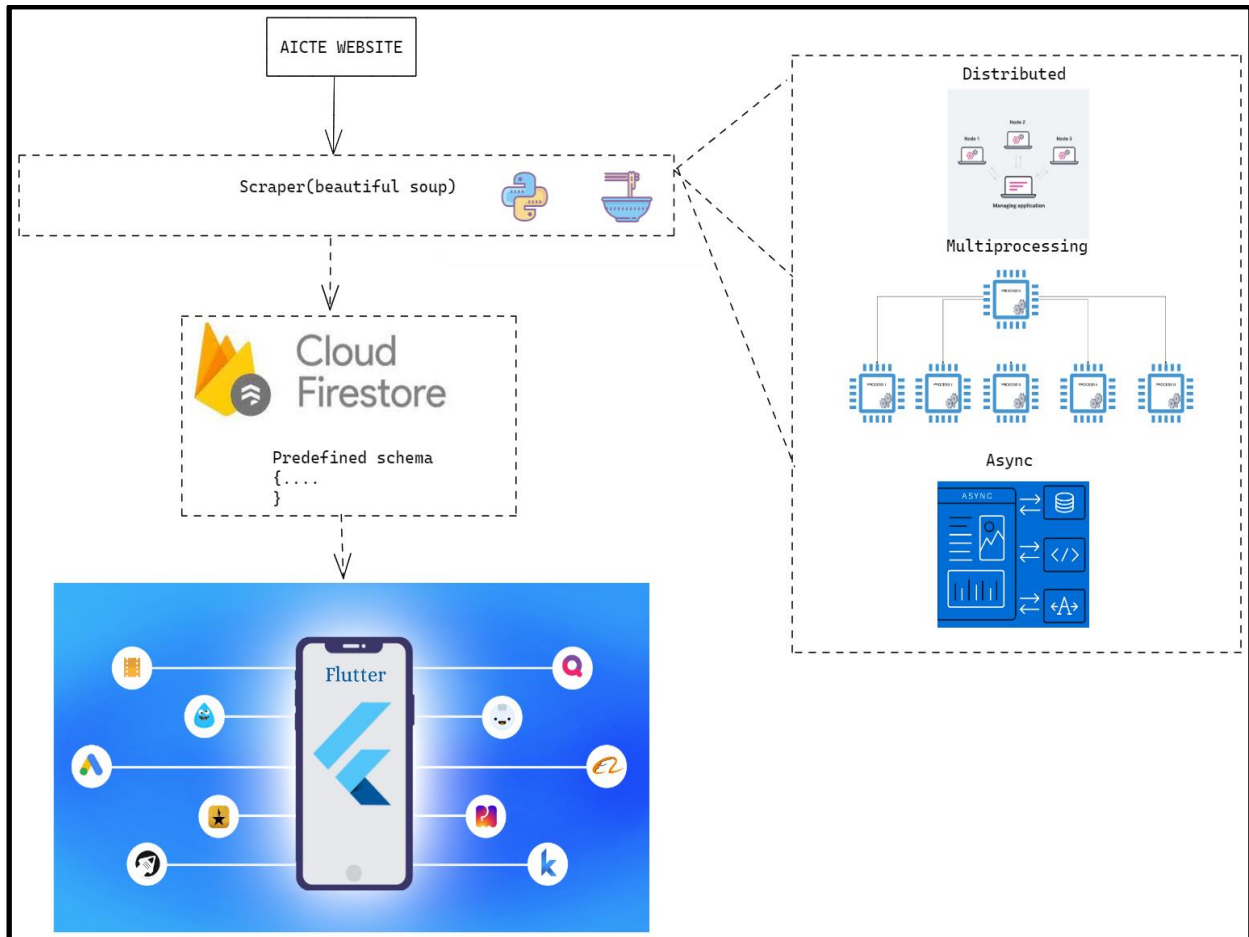

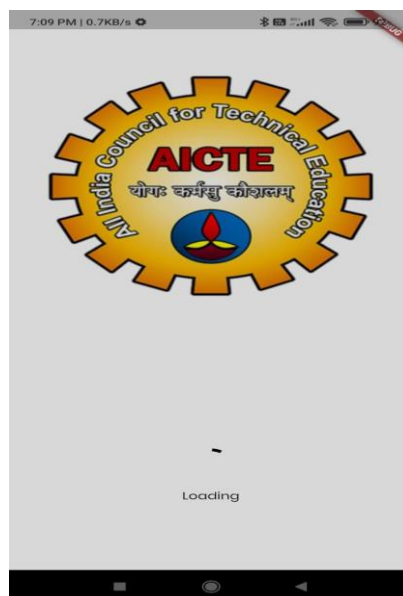**Figure:** Architecture of Application

V.   RESULT DISCUSSIONS

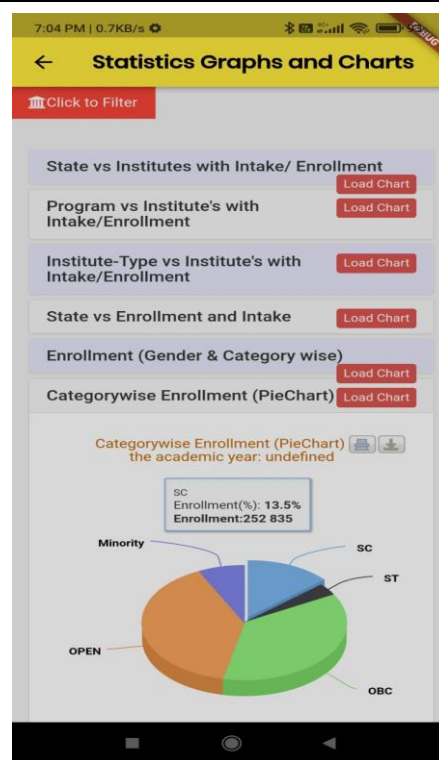
Fig 1: Splash Screen while opening the app

Fig 2: Home page   **Fig 3:** Statistics, charts and graphs
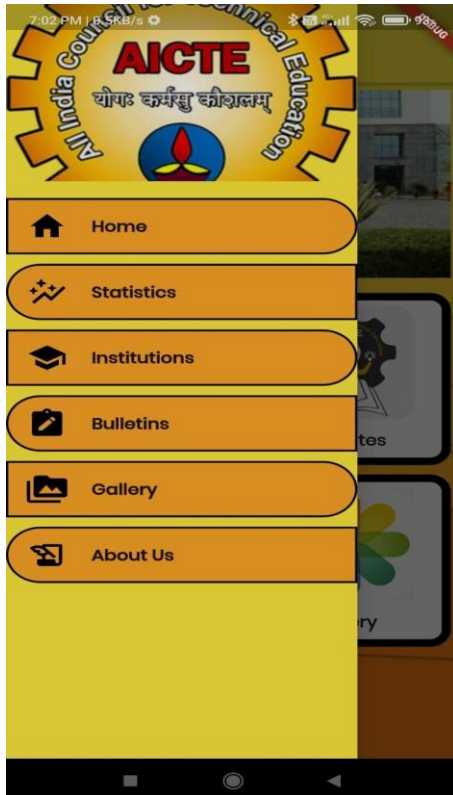
Fig 4: App Menu   **Fig 5:** Video Gallery   **Fig 6:** Graphs and Charts
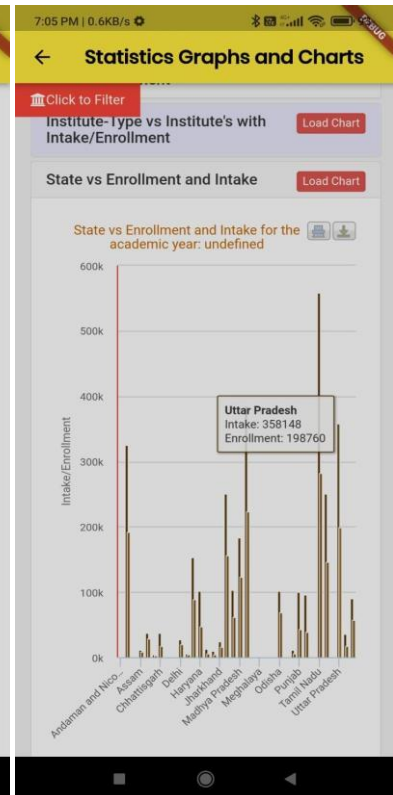
VI.   CONCLUSION

The project is a success and the app is live and is available through APK. The app is built using the latest technologies and the latest trends in the industry. The app is built using Flutter and the backend is built with python and beautiful soup. The database used is Firebase cloud firestore and MySQL. The scraper is deployed

on heroku. Scaling of the scraper is done by adapting the best industry standard or rather an ensemble of practices that are used by the best companies in the industry. The scraper uses distributed asynchronous multiprocessing to scrape the data from the AICTE website.

The app will be an adaptation for the pre existing website for AICTE which is a reliable source of information for any updates and information on current schemes , scholarships or courses provided by AICTE.

Mobile applications in general are more accessible than viewing in web browsers and since there's no official mobile app for AICTE , we will be making a replica or adaptation of their website in Mobile app form.

ACKNOWLEDGMENT

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