AdBarn: Unique Way of Earning Money through Advertisements

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ABSTRACT

Everyone wants to buy the product which best suits their needs. With many new products being launched everyday, it gets tough for the users to keep track of all of them. There are a few websites from where the people can buy few products but there may not be a portal where people can get to know about various products by watching the advertisements set up by the entrepreneur and get rewarded for just watching for it. The aim of this project is to create such a portal where people can watch the advertisements of the products and get rewarded for investing their time in watching those advertisements. This paper discusses the basic idea, the survey results to see the usability and feasibility of the idea, the basic features that will be provided in the application and the scope of the project that can be extended.

1. INTRODUCTION

Who does not want to buy the best product at the best cost. Nowadays, everyone buys the products online and e-shopping has become very common that people rarely go the store to buy what they need. Won't it be easy if there is a way to get to know all the products that are available in the market and choose the best one? And, what if there is a portal where all the entrepreneurs advertise their products and provide a link to buy the product online and give some rewards for just watching their advertisements ? What if there is a way to get to know the products by watching the advertisements from a portal and get rewarded by some rewards for the time the user invests for watching the videos? Will the user be able to select the product of his choice with ease?

We introduce AdBarn, an online portal where various enterprises can compile the advertisements of their various products and allow the users to search and browse through the different advertisements. The users get rewarded for investing their time in watching those advertisements and will be provided with some offers if the user decides to buy from the link provided by the entrepreneur. This portal will provide the user with various search options where the user can search the type of products the user wants to explore.

2. LITERATURE REVIEW

2.1 Video streaming

Due to the explosive growth of the Internet and increasing demand for multimedia information on the web, streaming video over the Internet has received tremendous attention from academia and industry. The two modes for transmission of video over the Internet are the download mode and the streaming mode. In the download mode, a user downloads the entire video file and then plays back the video. However, full file transfer in the download mode usually suffers long and perhaps unacceptable transfer time. In contrast, in the streaming mode, the video content need not be downloaded in full, but is being played out while parts of the content are being received and decoded. Streaming is the only sensible alternative when the data is retrieved through a network and consists of sequential information stored in huge files, as is the case of videos.

2.2 Commercials

Interest-based Behavioral Targeted advertising has risen in prominence as a method to increase the effectiveness of online advertising. Videos are expected to constitute more than 85 % of the traffic on the consumer Internet within the next few years. Video providers bear the costs of acquiring and delivering the videos to their audience. The question is how to measure the effectiveness of a video advertisement in various scenarios. Ads convey a message to the viewer and the key metric for ad effectiveness that is widely used in the media industry is ad completion rates. Advertisement completion rate is the percentage of ads that the viewer watched completely without abandoning in the video abruptly in between. Completion rates are perhaps the most tracked metric in an ad campaign since a viewer watching an advertisement to completion is more likely to be influenced by it. A related metric is advertisement abandonment rate that measures what fraction of viewers watched what fraction of the advertisement. The goal in any advertising campaign is to maximize video completion rates and minimize abandonment rates and to attract as many users as possible to increase their viewership and expand their brand value throughout the globe.

3. SURVEY

3.1 Survey Goals

Survey is an important source to get a real feedback from the intended users. A subjective approach might be intuitive in the initial stages, but is is highly recommended to move forward only with the objective information. Before launching a new product or application, we need to consider various factors such as acceptability, trust, willingness and feasibility. Positive survey results reinforce the fundamentals of the product or design and provide some insights necessary to improvise to reach the target audience in an effective way. As AdBarn is a relatively new idea, it's very important to scrutinize the acceptance and feasibility of this product. The common questions being with- How well do users or enterprises receive it? Will the users find a strong motive to use this product? Will enterprises invest in such products? What features do enterprise expect? In order to get clear insights about the feasibility, the cost metrics and several other statistical analysis, we see the survey as the closest approach in gathering required information.

The survey results can be used to modify, transform or add new features based on objective information. By gathering the survey results, we get to know how many users are interested to use this product and we also get a chance to restructure the product design and features according to the interests of the users and enterprises. This will finally help us in further development of the product.

3.2 Survey Results

In this section, we shall briefly go through various questions posted in the survey and responses on the same. The survey was conducted on roughly 25 students and they responded from both user and enterprise point of view. As part of the survey, both the users and the enterprises have been posed certain questions.

3.2.1 Survey results

Below responses and questions are collected, with people surveyed representing a normal user who browses internet.

Below results are from user's perspective

Question 1. As a web surfer, do you get annoyed when some web application pops up a random video Ad out of nowhere?
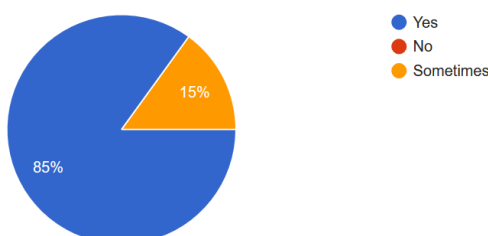

Figure 1: User Question 1

The main goal of this question is to confirm how annoyed the people are with random commercials popping up while browsing the web or when using a mobile application. We see that the majority of people find it annoying and only 15% of the people find these ads relevant.

Question 2. Would you still be annoyed if the web application pays you to watch the Ads displayed on their website?
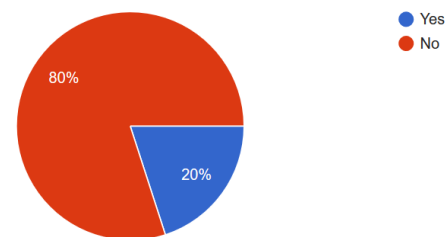

Figure 2: User Question 2

We posted this question to check if the users would watch the advertisements if they get rewarded and we found out that majority of the people surveyed do not hesitate to watch ads if watching commercials is rewarding. This was one of the most important results for further development of the project.

Question 3. If no, what according to you, would be an attractive amount for spending 15 mins(not necessarily at a stretch) of your time on viewing the ads? (in USD)
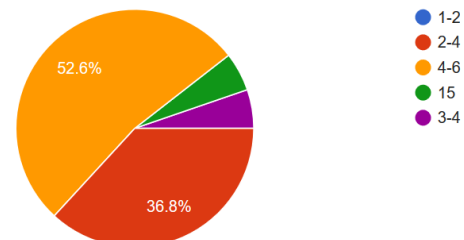

Figure 3: User Question 3

With this question, we wanted to know what would be the appropriate reward the users expect for investing their time to watch the commercials. We wanted to calculate the mean of the amount the users are expecting and know if the enterprise could match the user's expectations.

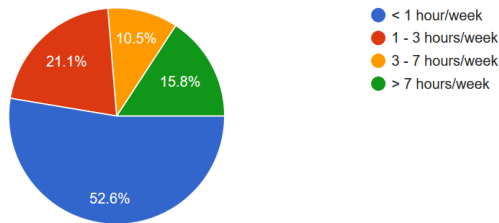**Question 4. How much time are you willing to spend per week to watch these Ads?(approx)**

Figure 4: User Question 4

The above question was aimed to get an estimate of how much time the user will watch the commercials in a week if the user gets desired amount of rewards.

Question 5. Also, what is minimum amount of money you would expect to receive for watching 15 mins(not necessarily at a stretch) of ads on the portal?(in USD)
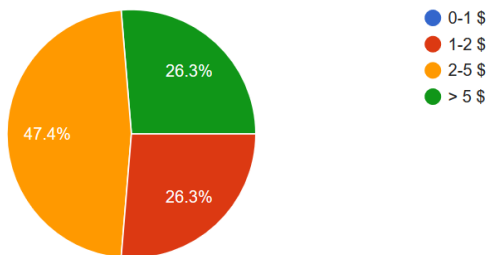

Figure 5: User Question 5

This question was posted to get an idea regarding the ideal amount a user is expecting to earn by watching the ads in the portal.

Question 6. How much time are you willing to spend per week if you get the minimum amount you expected?
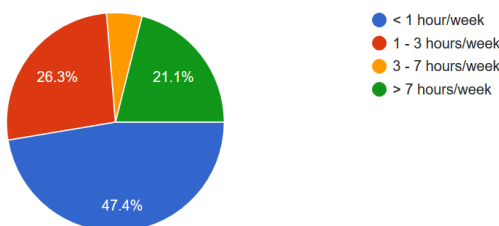

Figure 6: User Question 6

This question was posted to find out if there is a difference in the amount of time the user will watch if the user us being rewarded with a minimum amount instead of being rewarded with the expected amount. We calculated the variance in mean time the user will watch the commercials given two different situations.

3.2.2 Entrepreneur Survey results

Below responses and questions are collected, with people surveyed representing Enterprise, who publicize their commercials over internet.

Below results are from enterprise perspective

Question 1. As an Enterprise, would you like to place your ads in a portal which doesn't allow the users switch tabs while viewing your Ads?

This question was posted with an intention to check if the enterprises are willing to publish their advertisements in a portal given the above conditions mentioned in introduction.
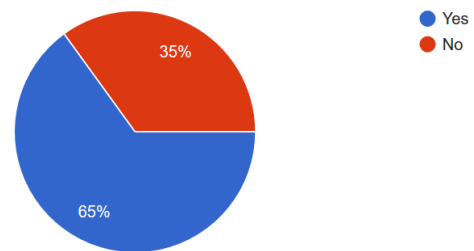

Figure 7: Enterprise Question 1

Question 2. If yes, how many customers are you expecting to see in a span of 15 mins of time?
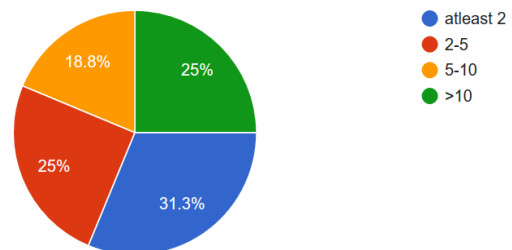

Figure 8: Enterprise Question 2

With this question, we tried collecting the information on how many users an enterprise is targeting in a span of 15 min. We got varied responses for this question and from the results this can be co-related to the importance of each commercial the enterprise thinks of, given its product's value.

Question 3. If yes, how much money are you willing to spend on an ad for 15 mins of total viewership(not by a single user)?(in USD)
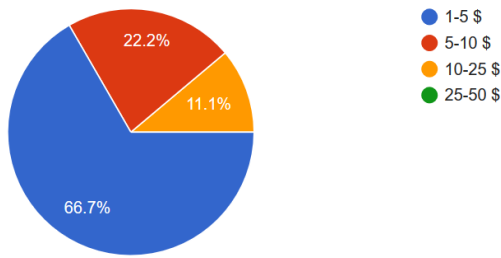
Figure 9: Enterprise Question 3

Given an enterprise is positive with question 1, we tried to deduce the amount an enterprise is willing to spend for a span of 15 min. From the survey we see that the majority of enterprises try to minimize the expenses, this might again vary depending on the ads and their priority.

Question 4. For the above question, how much are you willing to pay for a premium Ad, assuming the Ad is very important to you and given the Ad is directed to more relevant viewers
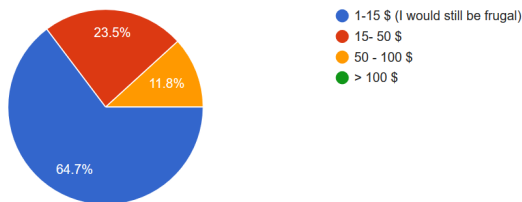

Figure 10: Enterprise Question 4

This question was aimed to segregate the expenses of enterprise on premium ads. Given the above conditions we see that, enterprises continue to minimize their costs and very few surveyed people were willing to pay extra amount for premium ads.

4. PROJECT GOALS

The goal of this project is to create a common portal where the users can watch all the available advertisements of different products and earn some rewards and also allows entrepreneur to advertise their product at a cheaper cost and provide multiple hyperlinks to buy their products online. The target users for this project will be the people who are enthusiastic shoppers and willing to explore new products and get some rewards for just watching the commercials uploaded by the entrepreneurs.

On a brief note, we can view this as a warehouse to store the advertisements where enterprises and end users collaborate together for mutual benefit.

There are few questions on the uniqueness of this project. Let's go through them.

How different is this portal from the e-commerce websites?

- AdBarn's main focus is to gather all the advertise-

ments provided by various enterprises and display them to the users as per their interests.
- AdBarn's scope is not just confined to the products available on e-commerce websites but it also includes products available on various other places like Android play store, Apple Store and Windows store, etc.

How different is this website to a normal video streaming website?

- We are confined only to commercials
- Unlike other video streaming websites, we charge the enterprises for uploading videos and the users get rewards for watching the videos.
- Video viewers benefit by having all commercials in a single portal.

Everything seems cool, why would a user use this platform?

- The key motivation for the user is getting rewarded for viewing the advertisements instead of some third party getting rewarded for serving the advertisements.
- Also, ads will no more be annoying. You get to choose what to watch (based on preferences and search query).

Do you think you can attract enough members?

- We can not build the perfect platform in a single go. Given everything works out well, we are confident on our idea. If we are good enough to develop this to a standard portal, rest follows.
- With a good planning and good user space, we can develop this portal step by step by implementing all the additional features as mentioned in future scope. [**?**]

4.1 Project Flow

This application will have two different logins, one for the user and the other for the entrepreneur. From the users point of view, once a user logs into the portal, a list of advertisements will be displayed based on the preferences given by the user. The user can pick any of the videos and watch whatever the user needs and once the user has completed watching the video, the user will be rewarded in an internal website wallet where all the transactions take place. The user then can watch further videos and can choose any videos by searching and sorting the advertisements he needs. Moreover, if the user likes one of the advertisements and wants to buy that product, hyperlinks to various websites will be provided beneath the video from where the user can purchase the products. From the entrepreneur's point of view, the entrepreneur will be given a proper UI where he can upload various advertisements by deciding how much to pay for each view the entrepreneur gets. Priority will be given to the entrepreneurs who pay more and their advertisements will be ranked higher in the search results when the user searches for a related product. Few statistical options will be provided both to the user and the entrepreneur. Also, graphs for the product reviews, number of views in a particular time period will be shown for the user to decide on which advertisement to watch and which product to buy.

4.2 Project Implementation

The project will be implemented using the MEAN Stack. The front-end will be developed using AngularJs and the backend will be developed in NodeJs which will inturn use ExpressJs to handle the API calls received. The data will be stored in MongoDB. Finally, Unit tests will be written in Jasmine.

5. EVALUATION CRITERIA

The applications can be tested based on the few metrics given below.

Scalability	+	Multiple users can access the application at once.
Availability	++	The application will be deployed to multiple servers and will always be available with very low to zero downtime.
Modularity	++	The application will be developed phase by phase and every functionality will be placed in a different component or module.
Security	+	The application is secure as password will hashed in the server.
Adaptability	++	The project will be adaptable as we are writing the business logic on server side and we just make the api calls from the frontend.

Moreover, unit tests will be written for the whole application and the test coverage can be considered as the base evaluation. Once the application is developed, different features can be tested in the application. Few major features which can be tested are stated below.

- Must handle unauthorized log in for users and entrepreneurs and should be able to avoid the access to unauthorized URLs.
- Search relevance should be maintained.
- The application must be able to handle multiple requests from a large number of users and enterprises at a single point of time.
- Checking the transactions from the portal to the user for watching the videos.
- The users should not get the rewards for watching the same video more than once.
- The entrepreneur's videos will only be displayed for the agreed amonut of time.

6. FUTURE SCOPE

Once the video database gets larger, various data mining techniques can be used to make the search better and return more appropriate videos in the suggestions area. In-app chat can also be implemented where the interested users can contact the enterprises to acquire more details about the product. Moreover, the project can also be extended to various platforms like Android, IOS and Windows. As the business logic will be written in the back end, it would be easy to integrate the mobile version of the application. Also, various affiliate marketing APIs exposed by some e-commerce websites like Amazon can be utilized to provide related product suggestions to the users after watching an advertisement. Also, the users will be provided with an option to report the abused and unrelated content. All such reported videos shall not be made visible to the users in the future and also the other advertisements of those enterprises shall be given a low priority in the future.

7. CONCLUSION

It is clear from the survey that most users are willing to view the advertisements and most entrepreneurs are willing to post their advertisements in the AdBarn portal. The user wastes no time in searching for the desired product online, he can log-in to AdBarn, search for advertisements related to the desired product, view the advertisements, can go to the link provided to buy the product and in turn user will also earns points for viewing those advertisements. All the entrepreneurs will also get benefited as they will have a single common platform to display their advertisements where lot of users are willing to view them. We managed to collect some useful information, on which we will be working for the upcoming month.

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