

# **Making the Most of Facebook Lead Ads for Managing Enrollment in Higher Education**

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## **ABSTRACT**

**Recruiting, retaining, and teaching students with exceptional abilities is becoming increasingly difficult for educational institutions in today's extremely competitive higher education market. Conventional methods of hiring, such as word of mouth, job fairs, and newspaper ads, may be labour intensive, costly, and ultimately ineffective. As the number of online platforms continues to skyrocket, social media has evolved into a practical tool for registration management. Meeting potential students using Facebook Lead Ads is a cost-effective and quantifiable strategy for educational institutions. By collecting information directly from Facebook users, educational institutions may save time and avoid sending prospective students to many landing pages via the use of Lead Ads. It becomes much simpler to pose inquiries in this way. The user experience and the likelihood of obtaining high-quality leads are both enhanced by this simple method. In order to increase the number of applications and enrollments in their programs, educational institutions may use advanced audience targeting tactics that evaluate factors like geography, interests, and online activities to interact with potential students. Better maintenance of prospective students' information, automation of follow-ups, and customization of interactions are all possible outcomes of lead data integration with customer relationship management systems. This research aims to examine the potential of Facebook Lead Ads to improve registration management by raising brand awareness, maintaining lead interest, and ultimately boosting enrollment. Clear value statements, attention-grabbing advertisements, flexible design, and rapid follow-up emails are some of the best practices that are highlighted. It then goes on to explain how to utilize statistics to find out how well a campaign did, how much money was made, and how to tweak certain methods. Using Facebook Lead Ads strategically to link recruiting staff with potential students might help universities boost enrollment and the likelihood that students would be a good fit.**

**Key Words:** *Facebook Lead Ads, Student Enrollment Management, Higher Education Marketing, Digital Recruitment Strategies.*

## **INTRODUCTION**

Given that There has been a proliferation of networks that facilitate the exchange of information ever since the Internet was made accessible. Almost everyone is familiar with the term "World Wide Web" (WWW) [1]. A new sort of information network known as "online social networks" has emerged in recent years. When contrasted with the early World Wide Web, these networks quickly gain popularity and users. These days, a lot of individuals meet potential romantic partners via social networking sites like Facebook [2], LinkedIn [3], and MySpace [4]. There are around 50 million users on MySpace and over 380 million on LinkedIn. Nine hundred sixty-eight million people use LinkedIn. In addition to YouTube[6], Google Video[7], and Flickr[5], users of other social networks may also post videos. A large number of bloggers also call BlogSpot [12] and LiveJournal [8] their home.

The original World Wide Web did not depend on data, but Web 2.0 makes heavy use of it. There is a common perception that social media users are inherently better than the general population. Once members join a network and start sharing material, they have the opportunity to become "friends" with one other. Finding other users with same interests and accessing material and information that "friends" have created or authorized are both made easier by this user-to-user relationship structure. Its job is to coordinate connections in the actual and virtual worlds.

These online social networks are becoming more popular, so now is a great moment to familiarize yourself with them, learn how they function, and make the most of all the features they provide. We can learn a lot about how to improve current technologies and create new ones by studying the evolution and structure of online social networks. This bodes well for the future of online social network-based systems, since they may be better understood and their impacts put into practice.

Via interacting with people online through social media Internet social networks at the university level have the ability to substantially enhance educational institutions. There could be many ways in which HEIs benefit from the provision of such services. The administration of information dissemination, the creation of new methods of instruction, and the

supply of artistic materials for use by teachers and students are all areas in which they may provide a hand.

We College campuses will benefit from this research because it will help students understand (a) how social networks function online and (b) how to apply this information to make predictions and recommendations based on actual Facebook groups that students participate in on campus. The following sections go into additional detail about each of them.

Besides creating methods for offline social network data collection, our primary goal is to learn about the structure of online social networks, particularly as it pertains to the people who are related to them. Secondly, we want to look at the Facebook groups related to universities by using what we know about how online social networks operate. As part of the research, a comprehensive analysis was conducted of Facebook groups pertaining to higher education. This analysis yielded a wealth of data on the group members. Due to intense rivalry and commercial interests, no publicly available real-world data sets are available at this time. The data sets used for the investigation were sourced from publicly available, open-source NASA Network Analysis Software Applications. As the research draws to a completion, it offers predictions and advice to universities that utilize NASA.

## **LITERATURE REVIEW**

Empirical studies demonstrate the growing effectiveness of social media advertising in student recruitment and enrollment outcomes. Research indicates that Facebook remains one of the most influential platforms among prospective students, particularly for program discovery and institutional comparison. Several studies report higher conversion rates and lower cost per lead when Facebook Lead Ads are used compared to traditional landing-page-based digital campaigns.

Quantitative findings reveal that institutions using Facebook Lead Ads experience improved lead quality due to advanced audience targeting features such as geographic location, age, academic interests, and online behavior. Empirical evidence also highlights the importance of rapid follow-up, showing that response times of less than 24 hours significantly increase application and enrollment rates. Institutions integrating Lead Ads with CRM systems have been shown to achieve better lead tracking, personalized communication, and higher yield rates.

Case-based studies from universities and private educational institutions further confirm that Facebook Lead Ads are particularly effective for short-term campaigns such as admission cycles, scholarship promotions, and new program launches. However, some empirical research notes challenges such as lead duplication, varying intent levels, and the need for continuous optimization to maintain performance, suggesting that Lead Ads are most effective when supported by robust data analytics and follow-up strategies.

## **CONTEXT AND PREVIOUS WORK**

In This section aims to introduce you to the basics of how online social networks function. We shall talk about the characteristics, causes of development, and connections among these networks. Then, we'll go even deeper into how online social networks function and why it's important to comprehend their design and characteristics before developing any kind of software for them. The measurement concepts needed for sophisticated graph data analysis will be covered in the following paragraphs.

### **A. Concerning OSMNs | Online Social Media Networks**

By (a) chatting with other users in real time, (b) perusing other users' profiles and connections, and (c) setting their profile visibility to a partial public view, members of online social networks may do three things. [22] is a All of these words have been used interchangeably in previous research.

Despite the fact that OSMNs may be useful in many ways, the study's results indicated that all SNA serve three main purposes. First and foremost, OSMs facilitate users' ability to stay in touch with one another, mend fences, and make new connections. individuals may be more "expressive and build noticeable peer networks" on social media since these sites enable users to "connect with other online people or groups whom they want to be part of their prolonged (or lengthen) social network" [22]. Due to the fact that all users that are connected to the network upload their own content to OSMNs, which subsequently archive that content. As a concluding point, official social media networks (OSMNs) help users find interesting material by collecting, curating, and recommending posts made by regular individuals. The accounts that individuals use and the material that they publish tend to vary across various social media sites.

### **B. Retrieving Structural Information from FB**

Various The easiest way to get information on Facebook's organizational structure is not to get in touch with the social media giant directly. There are a few sources where you may find this information. There is also the possibility of downloading data straight from the platform; however, this would need the reconstruction of the network model

thereafter. We may be able to get a sample that is typical of the social network and have a better understanding of the structure that is anticipated for it if we use this. This method's primary shortcoming is the length of time it takes to do a Web Mining task that is both extensive and complicated. This is a real solution, and the fact that it makes use of a wide variety of Web Mining techniques does not invalidate the fact that it offers this answer. As a result of the dynamic nature of the network and the fact that its structure is always changing, the sample would only give a snapshot of the structure of the graph before the data collection took place.

**ANALYSING SOCIAL MEDIA NETWORK APPLICATIONS**

The From the perspective of pleasant interactions and interpersonal ties, this chapter will examine Facebook and other "online social media networks" (OSMN). Facebook has more name recognition than any other social networking platform. Much of this part is devoted to outlining the framework of the Web Mining tool and its application to the study of Facebook's (FB) social networks. Along with this, the research delves into the many technological obstacles people face while trying to get data from Facebook.

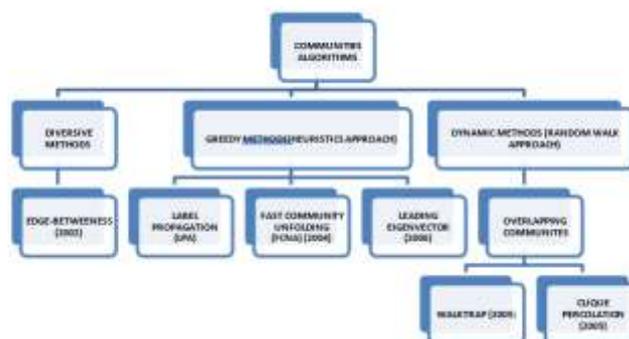
Based on data collected in March 2014, Facebook has 1.28 billion monthly active users, 609 million daily active users, and 1.01 billion mobile device active users. Beyond the US and Canada, 81.2% of our daily active users are from other countries. We want to make substantial use of this social network's features and services. The next step in accomplishing this goal is to gather and examine the data that is posted on the website.

**A. The OSMN's Foundational Architecture**

There is absolutely zero difficulty in identifying the Facebook network. It is feasible for any two nodes to become friends and converse with each other. This kind of graph is called a "uni-modal" graph since it does not have any levels. If one person's happiness makes another person happy, we say that the connection is "bilateral." For this Facebook graph, the equation  $G = (V, E)$  shows the end users (V) and the relationships (E) between them. Each node in this network is considered equally important, hence none of them are given a value. The graph also lacks an inherent orientation. Facebook was modeled using a basic, loop-free, unweighted, undirected graph in [114]. The procedure of configuring Facebook is more easier compared to other online social networks like Nobii[115], Flickr, and YouTube[116]. Twitter brags about its users' ability to engage in a plethora of interactions, such as "reply to," "mention," "following," and many more. The following part will cover two subjects: understanding the Facebook social network's design and retrieving data from Facebook.

**A. Earlier Communities Detection Algorithmic Approaches**

Before In this work, three essential components are meant to be brought into focus [66, 150]. This creates an opportunity for a more sophisticated method of community acknowledgment, which is of great importance for its growth in the future. Included in this category are various components, such as (i) the structure of the community, (ii) the method by which individuals apply to join, and (iii) the traits of members who are most likely to get along with others. The members of this group have an exceptionally high level of closeness with one another, which is not something that is seen in the broader population. This is one characteristic that distinguishes this group from others. In the event that a society exhibits weak links, this suggests that its people have a lesser degree of attachment to one another and a greater degree of attachment to the environment. On the other hand, a group that is close-knit is more attached to one another than they are to the rest of the world. The membership property, which may be held by a single person or a community group, is the next kind of property. Even in the case of individuals who do not dwell in the same neighborhood as a member, the probability of having neighbors who live in the same neighborhood is greater than the probability of having neighbors who reside in nearby communities. Any node or edge that is not a member of another community is normally located in the area with the nearest persons. The third phase consists of the development of members who exhibit overlapping characteristics, which allows for the concurrent representation of several members of the community.



**Figure1:Graph representing the classification of community algorithms**

### **B. Facebook Social Network Communities**

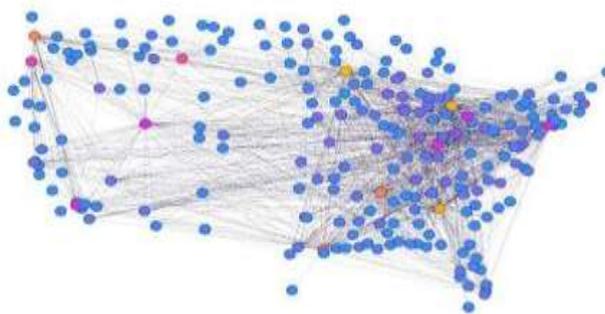
To One of the most important and difficult problems in the field of computer science at the present time is figuring out how to comprehend the generation that was born and raised on the internet and how they make use of social media. In this part, the results of the research are discussed, specifically with regard to the methods in which the most active Facebook users have discovered groups, collected data, and interacted with one another. For the purpose of analyzing Facebook's Higher Education (HE) social networks, researchers have only used fake networks; they have not utilized any genuine networks. The collecting of data sets is the initial step in the process of discovering and analyzing the online groups that emerge inside these networks. In this study, a number of different NASA network analysis techniques are used in order to deconstruct the community structure of these higher education networks that was acquired from Facebook down to its most fundamental components. In order to find communities that are representative of the groupings or aggregated units that are present in the network, the study investigates hundreds of users and the interactions that exist between them inside these networks. Lastly, the study included a discussion of a few topics that were agreed upon by members of the higher education network after an analysis of the data characteristics of the community. We provide the framework for future study into social networks and discuss how user-generated content (UGC) in open social media networks (OSMNs) may be able to assist the establishment of resilient and linked social structures. This chapter is where we cover the groundwork.

### **C. Evaluation Methodology and Datasets**

This For the purpose of this study project, the community design is only focused on Facebook (Fb), which is the most popular OSMN to date. In this part, the study technique that will be used to analyze and rank the different aspects of Facebook higher education networks is described in depth. The study analyzes a number of different network analysis software tools (NASA) [15] in order to get real examples of data from Facebook. A few examples of such applications include NodeXL, Gephi, LikeAnalyzer, and Netvizz, which is also referred to as FacePager. Additionally, it uncovers the mystery of the ego networks that exist on social networking sites such as Facebook. In order to collect measurements for the performance and efficiency of the network, a few programs developed by NASA were applied to a variety of HE graph datasets.

NASA makes use of numerical performance indicators in order to make a comparison between these communities and the communities that are based on the ground truth. The mesoscopic level structure of the networks that were found by the communities is quantified using network metrics in a similar manner.

The The primary objective of the study is to analyze and explore the similarities and differences between the structure of communities and the functioning of both real-life and online social networks. Through the use of NASA's network analysis capabilities, our research uncovered a large number of groups inside the Facebook social network data that were associated with organizations that were relevant to higher education. This is the Netvizz in [15].



### **D. Current Scenario of Higher Education**

HE 2.0 has here, and Facebook is the most rapidly expanding social networking site. It has rapidly risen in popularity as a method of communication and cooperation. In the past, teachers, administrators, and other members of the higher education professional (HEP) community used to benefit from the tremendous resources that students provided. There are many who argue that the teachers and staff at higher educational institutions (HEIs) are not as familiar with the internet communication technologies as the students are. As part of our study project, we investigate social network graphs that are associated with the educational institutions in India that provide advanced degrees. These may take the shape of groups or pages on social media where students and persons like HEP can communicate with one another. The poll revealed that a large number of posts and discussions are taking place online, despite the fact that other networks have fewer users. Techniques for social network analysis (SNA) allow for the examination of patterns of connection and social network engagement among students.

In The goal of this study is to investigate the ways in which spatial networks (SNs) are able to identify patterns in open source mapping networks (OSMNs). These trends arise from the contacts and patterns of sharing that occur between

students, experts in the field of higher education, and users of social media. It was during the course of a prior study attempt that we used the network analysis software tools developed by the National Aeronautics and Space Administration (NASA) in order to determine the core, perimeter, and defined members of the network as well as the fundamental design elements. It is possible to see, create, and describe the most often used terms or topics among the active users of the network by using these NASA programs, which provide us a sneak peek into the problem that is being addressed.

We Gephi, LikeAnalyzer, NodeXL, and Wolfram Alpha are just a few of the mining tools that NASA makes available; they were used. As a consequence of this, we were able to determine how actively staff and students participated in and how visible they were in social network graphs of the academic community. To investigate whether or if there was a relationship between Facebook and HE, we conducted our investigation. The numbers offered a comprehensive overview of how college students utilize Facebook. The findings and conclusions of our research on social network analysis suggest that Facebook and universities may make a suitable match.

## **DISCUSSION**

Today, Because of the huge number of users—which includes students, teachers, and staff in the higher education sector—this social media platform is seeing a surge in popularity. The academic community, which encompasses higher education institutions (HEIs), universities, and HEP, among other entities, is under significant pressure to update their teaching and learning practices in order to keep pace with the explosive growth of social media platforms. This pressure to modernize includes the addition of new elements or the modification of existing ones. The latest chapter in the history of higher education has begun. The effectiveness of online groups in improving the learning experience has been investigated via a wide number of research articles, interviews, and observational studies. These studies have looked at social media platforms such as Facebook. There are many who contend that kids would prefer to study on websites with online capabilities, such as Facebook, Moodle, and e-Learning software, rather than sitting in a conventional classroom. In schools all around the world, students depend on electronic devices such as laptops and tablets to a significant extent, and they are constantly on the lookout for the newest and most advanced versions. These technologies might be beneficial not just to instructors but to everyone else as well. With that being stated, it looks as if students and instructors might benefit from the use of social networking sites in the classroom.

## **CONCLUSION**

Originally The first impetus for the development of computer systems sprang from the need to address problems related to computing in the domains of commerce, education, and security. These days, they are beneficial for a broad variety of functions, including enhancing communication and connection with other people. People are able to do a wide range of tasks, such as working, playing, reading, studying, communicating, and expressing themselves, with the assistance of technology, which has become a fundamental component of many people's everyday life. For the purpose of my thesis, I performed research on online social networks, including their different features, and experimented with several online social systems that implemented these results. Given my belief that there are a million and one possible applications for them, I created this. The subjects that are discussed in this article might be the emphasis of study in the future. The primary arguments that this thesis presents will be summarized in the next section.

This In the last chapter of our study, we evaluate and summarize (i) the primary results and how our research connects to newer domains, as well as (ii) the future directions of our research and the topics covered in this thesis that may be explored further.

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