Twitter for University using Cloud

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Abstract

In this paper, we present a project that would provide twitter like website for a university purpose intended to use by the students, professors of the colleges in the University and a University Admin. The University admin will provide with all the necessary notifications regarding the events in the University for the students and professors like result notifications, timetables, events, fees, important dates, etc. The students and staff can follow the University Admin and get the necessary notifications just by logging into their accounts and viewing their home pages. Moreover, this project would be deployed on the cloud which would make this website available 24x7 and will reduce the overhead cost of maintaining the expensive servers for the University. This project aims at utilizing the social networking and technology for educational purposes and to improve the student-teacher interaction off the classroom.

Keywords: Cloud Computing, Online Learning, Student Engagement, Twitter

1. INTRODUCTION

In existing system, there is website for a university where the updates are viewed. The current University websites are crowded with the information concerned with all the courses and departments that University handles. Searching specific information of interest on any University website is a tedious and time consuming job. But in a typical scenario the server might be down, some information is not available on site or student community is just interested in result updates. The updates, notifications and other things are viewed by everyone. What if others are not interested in it? Staff of University might not be interested in receiving updates of a particular event and so on. For everything you need to visit University website.

In proposed system we will try to overcome some of problems encountered by creating a targeted application for a university i.e., particular to a community. For example student community can subscribe only for result updates; notifications about a particular subject and so on. We will be creating a project like twitter for University. This project will be deployed on cloud which will help in reducing the overhead cost and maintenance.

2. THEORETICAL BACKGROUND

2.1　　TWITTER

Twitter is an additional way to enhance social presence. Twitter is a multiplatform Web 2.0, part social networking - part microblogging tool, freely accessibly on the Web. Other popular Web 2.0 microblogging

tools include Jaiku, Tumblr, MySay, etc. Twitter, however, is one of the most popular of these microblogging tools and, therefore, was our tool of choice because it is well-established, has a large and growing participant base, interfaces well with other Web 2.0 tools, and is easily accessible.

According to the Twitter website, Twitter is a service for friends, family, and co–workers to communicate and stay connected through the exchange of quick, frequent answers to one simple question: What are you doin*g?* However, the people who participate in the Twitter community—people who are geographically distributed across all continents (with North America, Europe, and Asia having the highest adoption rate)—use it for more than providing updates on their current status.

In 140 characters or less, people share ideas and resources, ask and answer questions, and collaborate on problems of practice; in a recent study, researchers found that the main communication intentions of people participating in Twitter could be categorized as daily chatter, conversations, sharing resources/URLs, and reporting news. Twitter community members post their contributions via the Twitter website, mobile phone, email, and instant messaging—making Twitter a powerful, convenient, community-controlled micro sharing environment. Depending on whom you choose to follow (i.e., communicate with) and who chooses to follow you, Twitter can be effectively used for professional and social networking because it can connect people with like interests. And all of this communication happens in real-time, so the exchange of information is immediate. (Dunlap 2009)

2.2. CLOUD COMPUTING

Nowadays, the term "cloud computing" has been an important term in the world of Information Technology (IT). Cloud computing is a kind of computing which is highly scalable and use virtualized resources that can be shared by the users. Users do not need any background knowledge of the services. A user on the Internet can communicate with many servers at the same time and these servers exchange information among themselves. Cloud Computing is currently one of the new technology trends (broadband internet, fast connection and virtualization) will likely have a significant impact on teaching and learning environment. Senior people in charge of their business place challenge how to redesign their IT operations to support their business units in the light of different technology trends so they can achieve their corporate objectives. tables and figures you insert in your document are only to help you gauge the size of your paper, for the convenience of the referees, and to make it easy for you to distribute preprints.

Cloud computing is becoming an adoptable technology for many of the organizations with its dynamic scalability and usage of virtualized resources as a service through the Internet. It will likely have a significant impact on the educational environment in the future. Cloud computing is an excellent alternative for educational institutions which are especially under budget shortage in order to operate their information systems effectively without spending any more capital for the computers and network devices. Universities take advantage of available cloud-based applications offered by service providers and enable their own users/students to perform business and academic tasks. In this paper, we will review what the cloud computing infrastructure will provide in the educational arena, especially in the universities where the use of computers are more intensive and what can be done to increase the benefits of common applications for students and teachers.

3. TWITTER FOR EDUCATION

Faculties have recently begun experimenting with how to use Twitter in the "classroom". Communication faculties are not the only one's using Twitter in the classroom. The following describes the students' typical experiences using Twitter:

• A student is reading something in the textbook and has a question about the chapter on multimodal learning. He immediately tweets (i.e., posts) his question to the Twitter community, and gets three responses within ten minutes)—two responses from classmates, and one from her professor. This leads to several subsequent posts, including comments from two practicing professionals.

• A student is working on an assignment and is wondering about embedding music into a slideshow presentation. He tweets a question to the group and gets a response from his professor and a practicing professional. Both point the student to different online resources that explain how to embed music and

provide examples to deconstruct. Within a half hour, the student has embedded music in his slideshow presentation.

- A student sends a private tweet (i.e., a private message that only the named recipient receives) to project guide regarding a difficult situation with a project team member. While in the middle of a departmental meeting, project guide immediately tweets back, arranging a time to talk with the student outside of Twitter.

- A student cannot believe what she has just heard on the news regarding federal funding of higher education and needs to share. She tweets her comment, and immediately connects with others who cannot believe it either.

- A student finds a great video about storyboarding on YouTube and posts the URL to Twitter. Her find is retweeted (i.e., reposted) three times because others also think the video is great and worth sharing.

- Joni and Patrick, who are both away at conferences, tweet various updates about what they are hearing and seeing at the conference.

- Several of the students are posting comments to Twitter while they watch a political debate. They provide commentary, along with several thousand others who are also in Twitter while watching the debate.

- A student tweets that he just posted a new entry to his blog on how vision trumps all other senses during instruction and provides the URL. His classmates, as well as other practicing professionals, read his blog post. He receives three tweets thanking him for sharing his ideas.

- As part of a research project on legacy systems, a student poses a question to the Twitter community regarding the prevalent need for COBOL programmers. She receives responses from several IT professionals, some with links to helpful resources and contacts that can help her with research.

- A student tweets that she is tired and going off to bed. She receives two tweets back from classmates wishing her a good night.

Through the use of Twitter in this way as a tool that enables just-in-time communication with the local and global (practicing professionals) community, student are able to engage in sharing, collaboration, brainstorming, problem solving, and creating within the context of their moment-to-moment experiences. Because of Twitter's ability to enable persistent presence, our social interactions occur more naturally and immediately.

4. OTHER INSTRUCTIONAL BENEFITS OF TWITTER

Besides the benefit of enhancing the potential for positive social presence during online learning opportunities, Twitter has other instructional benefits.

4.1 Addressing Student Issues in a Timely Manner

Students can use Twitter for time-sensitive matters: to ask for clarification on content or assignment requirements, notifying of personal emergencies, and alerts to issues that need some attention and action. Even though we log into the LMS several times a day, this immediate communication allows to attend the issues in a timely manner.

4.2 Writing Concisely

Because a tweet is limited to 140 characters, this encourages students to write clearly and concisely. Although a very informal writing style, it is a professionally useful skill for students to develop, especially given the growing popularity of this category of communication tool.

4.3 Writing for an Audience

Although Twitter elicits open sharing and an informal writing style, it is nevertheless critical to know your audience and share accordingly. Participating in the Twitter community helped our students learn to be sensitive to their audience, and make professional decisions about what perspectives and ideas they should publically contribute and what perspectives and ideas should remain private.

4.4 Connecting with a Professional Community of Practice

A great benefit of participating in Twitter is that many practicing professionals also participate. For example, a number of the textbook authors participate in Twitter. Besides the networking potential, students receive immediate feedback to their questions and ideas from practicing professionals, which serves to reinforce the relevance of Twitter participation and enhance their understanding of our course content and their enculturation into the professional community of practice.

4.5 Supporting Informal Learning

Informal learning involves "activities that take place in students' self-directed and independent learning time, where the learning is taking place to support a formal program of study, but outside the formally planned and tutor-directed activities". Twitter was one tool that students used to support their informal learning activities. Through their participation in the Twitter community, they discovered resources and tools that they effectively applied to their coursework.

4.6 Maintaining On-going Relationships

Student and faculty use of Twitter is not bound by the structure of an LMS or the timing of a semester. Twitter enables faculty and students to maintain on-going relationships after a course ends. Although the semester is over, they are still in daily communication with several students from the courses. This allows continuing to advise students academically and professionally. It has also allowed for a much more natural and organic progression of relationships; instead of severing the connections at the end of the semester, we are able to continue to be in community together, learning from each other and sharing our moment-to-moment experiences.

4.7 Possible Drawbacks of Twitter

Like most, if not all Web 2.0 tools, Twitter is not appropriate for all instructional situations. For instance, Grosseck & Holotescu (2008) identify a number of problems with using Twitter for educational purposes. For instance, Twitter can be time-consuming, addictive, and possibly even encourage bad grammar as a result of its 140-character limit. Further, while Twitter is free to use on a computer connected to the Web (whether accessed via a web browser or a Twitter client like Twirl), faculty and students might be charged texting or data fees if they access Twitter on their cell phone (depending on their cell phone plans).

Despite possible drawbacks like these, the instructional benefits encourage us to continue to incorporate Twitter in our online courses (as one more tool in our toolbox), and look at other Web 2.0 tools that may help us extend the instructional power of a LMS and further enhance the social presence potential of the online learning opportunities we design and facilitate Twitter in the classroom. (Dunlap 2009)

5. EDUCATIONAL USAGE OF CLOUD COMPUTING

The Cloud delivers computing and storage resources to its users/customers. It works as a service on demand policy. Cloud computing is a new business model wrapped around new technologies like virtualization, SaaS and broadband internet. Recent interests offered new applications and elastic scalability with higher computing parameters. So that, these positive effects have shifted to outsourcing of not only equipment setup, but also the ongoing IT administration of the resources as well.

Refer Figure 1.

Many technologies that were previously expensive or unavailable are now becoming free to anyone with a web browser. This is true for all web sites, blogs, video sharing, music sharing, social sharing, collaboration software, editing/presentation and publishing, and computing platforms in the "cloud". Students are already using many of these technologies in their personal lives. In the professional world, the trend of discovering and using technologies in our personal life is called "consumerization". This means we should demand and consume the required services. Our education system should take advantage of this same trend, which will both enrich our student's technology enabled education, and importantly, reduce the budget impact in academic institutions. University management should identify and leverage emerging technologies that are cost-effective, and strive for the broadest feasible and equitable access to technology for students and staff. The need for hardware and software isn't being eliminated, but it is shifting from

being on-premises to being in the cloud. All that is needed is a cheap access device and a web browser, broadband in the schools, perhaps wireless hotspots. (Ercan 2010)

5.1 Five Key Characteristics

5.1.1 Rapid elasticity: Capabilities can be rapidly and elastically provisioned to quickly scale up and rapidly released to quickly scale down.

5.1.2 Ubiquitous network access**:** Capabilities are available over the network and accessed through standard mechanisms that promote use by heterogeneous thin or thick client platforms (e.g., mobile phones and laptops, etc.).

5.1.3 Pay per use**:** Capabilities are charged using a metered, fee-for-service, or advertising based billing model to promote optimization of resource use.

5.1.4 On-demand self-service**:** With many cloud computing services, a consumer can unilaterally provision computing capabilities, such as server time and network storage, as needed without requiring human interaction with each service's provider.

5.1.5 Location independent data centre's**:** The provider's computing resources are usually pooled to serve all consumers using a multi-tenant model, with different physical and virtual resources dynamically assigned and reassigned according to consumer demand.

6. BENEFITS OF PROPOSED SYSTEM

I. Students can get all the necessary notifications of interest very easily and at one place

II. Students can stay connected with the professors out of the classroom for necessary guidance

III. Users can share files with multiple users or a single user

IV. The application will be available 24x7 as it is deployed on cloud

V. The cost of university to maintain expensive servers will be reduced

7. COMPARISON

Refer Table 1

8. CONCLUSION

We provided evidence to suggest that students and faculty were both highly engaged in the learning process through communication and connections on Twitter and students will get updated events, results, Exam details…etc. from university. This project is used to know how to work in cloud environment as the future of IT Industry is treated as cloud computing.

9. REFERENCES

Dunlap, J.C. & Lowenthal, P.R. (2009), "Using Twitter to Enhance Social Presence" in the Journal of Information Systems Education, 20(2)

Ercan, T. (2010) "Effective Use of Cloud Computing in Educational Institutions" in Procedia Social and Behavioral Sciences 2 (2010) 938-942

Armbrust, M., Fox, A., Griffith, R., Joseph, A.D (*et-al.*), "Above the Clouds: A Berkeley View of Cloud Computing", Electrical Engineering and Computer Sciences, University of California at Berkeley, Technical Report No. UBS/EECS-2009-28

Pocatilu, P., Alecu, F. & Vetrici, M., "Using Cloud Computing for e-Learning Systems" in Recent Advances on Data Neworks, Communications, Computers, Academy of Economic Studies, Bucharest, Romania pp.54

Grosseck, G.., Holotescu, C., "Can We Use Twitter for educational Acivities?" in the 4th International Conference eLSE "eLearning and Software for Education", Bucharest, April, 2008

Figure 1. Results of Survey in 2009

Percentages for cloud usage in different Industrial Sectors and Services
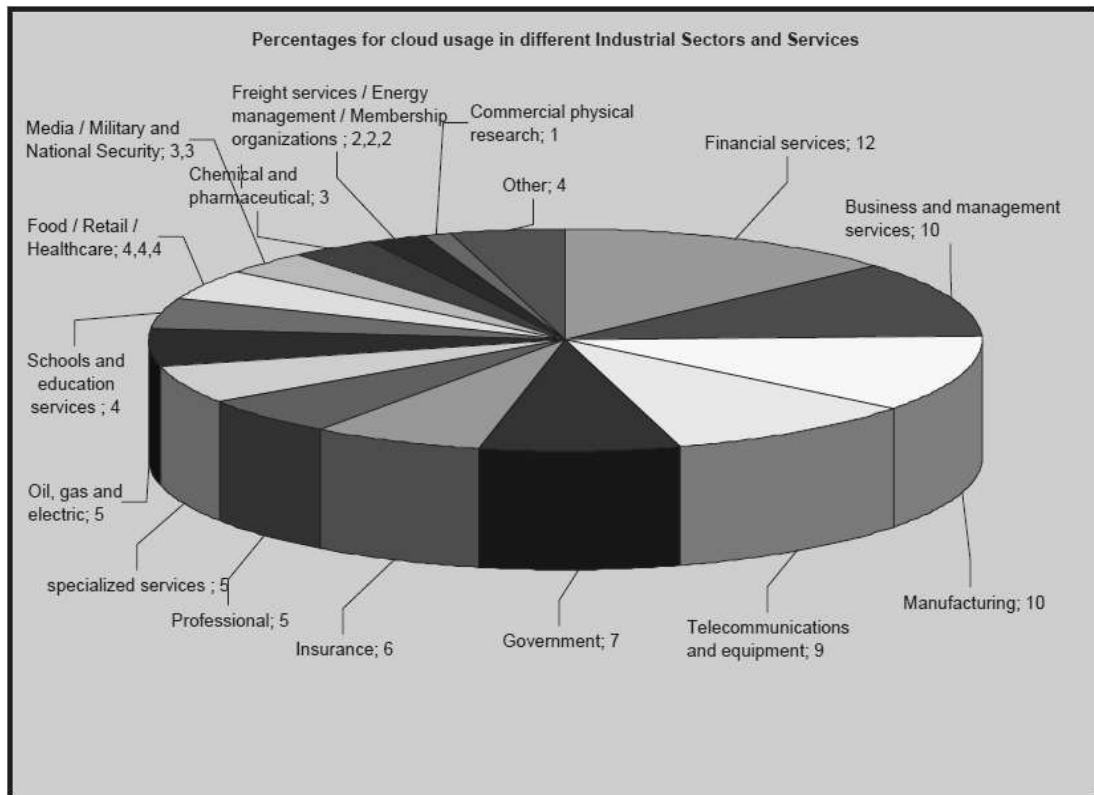
The results of a survey that have been completed in 2009 by Gartner analysts (Figure 1) about the IT trends (especially cloud computing) show that it is being used more in the areas of finance and business when compared to other sectors (Gartner, 2009). Results are shown as a pie chart and the labels on each different slice represent different industrial sectors and services. The "/" is used to separate different sectors with the same percentage.

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Table 1: Comparison between Existing and Proposed Systems

Sr no	Existing System	Proposed System
1	Intended for social networking and micro blogging	Intended for educational purpose
2	Availability problem	Available 24x7 as on cloud
3	File sharing is not allowed	File sharing is allowed
4	Maintenance cost of large servers is more	Maintenance cost of servers is minimum