

## Using a Social Machine for Promotional Marketing on Campus: A Case Study

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### Abstract

This research project involves the design and construction of a social machine to promote our university's quality enhancement plan [or QEP] with students and faculty on campus. A social machine is a location-based interactive marketing device that creates an opportunity for audience engagement by combining inputs from an online social media platform or App, typically through an end-user's smart phone or computer, to bring about an interaction/reward from a preconfigured mechanical device. Building on a design-idea developed by iStrategy Labs (a marketing agency located in Washington D.C) called the "Twitter Locker," we propose to describe the design, construction, and marketing plan of our social machine to scholars at the Atlantic Marketing Association's annual conference. The primary purpose of our machine is to create meaningful interactions and knowledge building opportunities for students and faculty on campus that relate to our university's QEP topic areas: information literacy and undergraduate research. Broadly described, our project involves interdisciplinary student collaboration in the disciplines of marketing and computer science and aims to build excitement and measurable engagement related to the University's QEP program.

Beyond the tactical role that a social machine can play in the marketing campaign of our university's QEP, there are three larger research questions that underlie our project. The first question, framed as a question of applied research, is how does the internet of things actually work? More precisely, how does an analog machine with a simple on/off switch get connected to an online social media platform? According to Gartner Inc., an IT research and consulting company, there will be an estimated 26 billion internet connected devices by 2020 (Morgan, 2014). Whereas human-to-human communication and connections are expected to remain relatively stable and fixed, the number of human-to-machine and machine-to-machine connections are anticipated to grow exponentially. The growth of the internet of things will undoubtedly have an impact on a number of evolving industries, marketing and business retail certainly not excluded. Learning how humans interact with machines and machines interact with each other by building our own version of social machine proves insightful at a time when automation and mechanization are beginning to emerge as common and mainstream business solutions.

At present, our **simple design** for our social machine interaction has four basic steps: (1) an online social event is initiated and completed; (2) a signal is sent and received by a microprocessor (a Raspberry Pi 3, Model B Microcomputer, the brain of our social machine); (3) there is an analog response (the machine reacts, e.g., the spring loaded doors of our locker are activated via electro-magnets); and (4) a reward/prize or marketing premium is produced for the end-user/participant (out pops a pencil, notebook, or thermos promoting the University's QEP). At first, our simple design involves a straight forward social event, such as an internet scavenger hunt or a survey/quiz on 'best practices for conducting academic research.' In truth, the complexity of our interaction design can really expand in two directions, depending on the future success of our prototype and feedback from our market research. For example, on the online social event side of things our design can engender more opportunities for engagement and learning (fostering and supporting the marketing goals of the University's QEP) and similarly, on the mechanical/machine programming side of things, the design can be altered and added to, once our initial goals and interaction conditions are met and satisfied (i.e., more bells, whistles, and effects can be added).

The second research question of our project involves understanding and assessing the role that informal learning communities can have for academic study. That is, what role might an open source developer's platform such as Code Academy, GitHub, or Pluralsight have for suggesting new methods or content areas for established academic courses and curriculum? One emerging reality for many technical fields is that online support/learning communities for developers are now considered standard parts of the research and development process. Having the opportunity to explore and participate in these open developer platforms, while investigating and exploring

solutions for our social machine, has led to new and fertile ideas we can report on.

The third and last larger research question of our project is understanding the role that industry can play in the process and practice of applied academic research. That is to say, how has our partnership with industry experts to perfect and improve upon our project idea impacted our process and understanding? A central, if not essential, aspect of our project is that after we developed our prototype and working model of our social machine, we were able meet with two companies in northern Virginia/Washington D.C. to discuss our progress. They are iStrategy Labs (an interactive marketing agency) and Zoomph (a marketing analytics and marketing automation company). Asking specific questions about the refinement and implementation of our social machine with professional experience designers and computer programmers and getting feedback adds an element of insight and professional oversight to our project. Framing good questions to industry experts to improve on our prototype, responding to their feedback and criticisms, are two aspects we can report on.

Advances in social media networking have led to rapid changes in the field of marketing. Much of the traditional marketing methods of email ad campaigns, telemarketing, and cold calling are becoming inefficient at reaching consumers. Today, marketers are taking advantage of social networks through buzz marketing. This method of interactive marketing relies on utilizing the networks of relationships consumers have from social media. Marketers generate “buzz” over social media through creating interactive content that engages potential customers in a way old marketing strategies could not do. Once the content is released on social networks, it is passed from consumer to consumer by word of mouth, likes, and shares over social media. The idea behind this type of viral marketing is that as one potential customer shares it, five to ten more will hear it and then pass it on, exponentially increasing the spread of the content similar to the spreading of a virus (Li, 2008).

Another up and coming trend in modern marketing is the use of social machines to interact with the target market in a meaningful and memorable way. As defined by a research group at the University of Southampton:

‘Rather than drawing a line through such Web-based systems to separate the human and digital parts (as computer science has traditionally done), we can now draw a line around them and treat each such compound as a ‘social machine’ — a machine in which the two aspects are seamlessly interwoven. Social machines can be characterized as assemblies of manually executed and machine-driven (as in ‘automatized’) services and the interaction of such services’ (Shadbolt et al., 2013).

This description underlines the idea that social machines are computers that take inputs from both animate and inanimate sources, integrating both sources of data into one seamless experience.

By combining social machines with interactive marketing methods, marketers can effectively engage users in an experience that they will be far more likely to remember than any standard method of advertisement. One marketing agency, iStrategyLabs, creates a variety of social machines and ad campaigns for major clients including Facebook, Coca-Cola, Instagram, and Disney. Contracted to Red Bull and the Brooklyn Nets, iStrategyLabs created a physical social locker containing Nets merchandise. When users approached the locker, they were prompted with an exciting trivia game focused around the Brooklyn Nets. If they answered all the questions correctly in under 24 seconds and - shared their results on Twitter, they would have their name submitted into a randomized algorithm for a chance to win the coveted contents displayed the locker. The prizes were regularly updated and used to successfully generate brand awareness for Red Bull, and the Nets (iStrategyLabs, n.d.).

In our research, we found little literature about the usage of social machines on college campuses. One anticipated future direction of our research is to establish a guide for the usage of social machines as a form of marketing to college students. We expect that this type of marketing will be extremely effective on college campuses. Approximately 86% of U.S. adults have at least one social media account by the age of thirty, with Facebook and Instagram being the most commonly used social media platforms (Pew Research Center, 2017). Over time, this

number is only expected to increase. With such a high percentage of college students being active users of social media, buzz can be generated quickly, and content can go viral in a matter of minutes.

The anticipated results of our research project include student and faculty advisor gains in problem solving, critical thinking, software development, and computer programming. Collaboration and consultation with industry partners should also prove to be useful for assessing industry opportunities as well as areas of future academic study and curriculum development. The interdisciplinary nature of our project design, in particular, with two students working on a prototype design, and then later gaining insight and advice on how to implement and deploy the social machine should lead to successful results. Control metrics from audience engagement and progress reports on accomplishing the marketing goals of the University's QEP are also anticipated.

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**Keywords: interactive marketing, internet of things, Raspberry Pi GIPO, social media APIs**

**Relevance to Marketing Educators, Researchers and Practitioners:** This case provides an overview and description of an interactive marketing device that is designed for the purpose promoting a university campus initiative.

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