Trends in Technological Developments

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**MEMORANDUM**

TO: [First Name and Last Name]

FROM: Debashis Jena

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SUBJECT: Trends in Technological Developments

**Introduction**

Market analysts use the word “FAANG” frequently today. FAANG is the acronym for Facebook-Amazon-Apple-Netflix-Google. Undoubtedly, they are the leading companies in the market; not only in the field of technology, but also in the entire stock exchange. Watching the market’s demand closely, adapting to the current trends, and innovating on top of their existing stack of products, have been the recipe to their enormous success. Each of these tech tycoons started with a business which they either expanded or changed to cater to customers’ demands and adhere to the current trends. Although, Facebook is well known as a social networking website, but medium to large business have started using the messenger bots for their customer service automation. Similarly, even though Amazon and Google are frontrunners in their own respective fields, their IoT (Internet of Things) products have been very popular among users from all age groups. Apple caught up with the race by recognizing the value of health analytics, which made them innovate their smart watch and integrate it with the phone.

So, three trends out of many in current technological developments are; use of chatbots, IoTs and wearable smart devices.

**Discussion of three trends**

Chatbots are powered by Artificial Intelligence (AI) and machine learning. When smart phone apps emerged into the market, the use of an internet browser started to decline. “On phones, 86% of our time is spent in apps, and just 14% is spent on the Web” (Christopher Mims, Nov 17, 2014) The apps were right at your fingertip, and you didn’t have to type a web address and browse through. Now there is another shift happening, which is chatbots. “Just as websites replaced client applications then, messaging bots will replace mobile apps now.” (Beerud Sheth, 2015). Facebook messenger has integration with bots from a wide range of small and big companies. For an example, Marriott has its booking bot within Facebook messenger where guests can enter the city name and date to get hotel suggestions. Also, financial organizations have started using these chatbots extensively to automate their customer support. Now, for a simple transaction, customers do not have to make a phone call to the bank. The chatbots are intelligent and secure enough to do the financial transactions. Usage of chatbots have become a win-win situation for both the users and the business owners. From a customers’ perspective, it is readily available to them 24/7; no hassle of making a phone calls or waiting for the next available representative. Similarly, for business owners, the usage of bots has increased the efficiency of service; more accuracy in serving the customer; helping them in gathering more data about the customer, which eventually helps them target the right customer. Chatbots are certainly going to be game changers. Based on a survey 80% of businesses want chatbots by 2020 (Business Insider Intelligence, December 14, 2016).

The next big innovation is the Internet of Things (IoT). An IoT can be any device that is connected with a simple sensor or a smart phone or a wearable smart watch via internet. Google’s Nest has been one of their highest sold household products. This intelligent device analyzes information about a user’s comfort level and based on the data gathered, it automatically sets the temperature. The Nest not only controls thermostats, but also a lot of electrical appliances, light bulbs, and switches can be connected to the smart phones through IOTs. It has made customers’ lives easier, and most importantly it has helped customers save energy significantly. Energy companies encourage their customers to take advantage of these devices. Even though there were some security concerns initially, these leading companies have started taking major steps to address that issue. “We are looking at a future in which companies will indulge in digital Darwinism, using IoT, AI and machine learning to rapidly evolve in a way we’ve never seen before," (Brian Solis, 2018).

Wearable smart watches have been around for a few years now. However, the latest innovations by companies like Apple and Fitbit, have been revolutionary. “New smartwatches can detect if an elderly person has fallen and will call emergency services if they lie motionless for more than one minute, a feature that has been heralded as a "game changer" in the wearable market.” (Margi Murphy, 2018). The usage of these watches has not only been observed within senior citizens, but also in all age groups. “[The people] with the trackers managed 4.8 days activity a month on average - compared with 3.5 days among those without such devices.” (Rand Europe, 2018). Recently, Apple released the new version of their watches which can read heartbeats and alert the user in case of any abnormalities. In future, they are going to come up with even more improved versions of these wearable devices.

# Conclusion

Technological developments have been observed in many other fields as well. However, evolution of AI has made software developers eager to build upon these three trends. Chatbots, IoT devices, and wearable watches have made the lives of customers easier. However, some users have shown some reluctancy to use these products and questioned the security of such devices and data privacy. The producing companies have been working hard to address this concern, and they have come a long way.

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