

Chapter 54

Review of Discussions on Internet of Things (IoT): Insights from Twitter Analytics

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ABSTRACT

User generated content in the social media platforms are being considered as an important source for information about consumers and other emerging trends by the businesses. Using Twitter analytics, the paper presents insights on trends and discussions about the Internet of Things (IoT). Using relevant hashtags, 40,387 tweets were collected in early 2016. The analysis had followed three major approaches: descriptive analysis, content analysis and network analysis. The tools R and NodeXL were used for the analysis. The findings showed major themes like business concerns, scope of applications, security, emerging smart technologies and manufacturing. The sentiments of emotions and polarity differed across these themes. The top individual and industrial influencers were identified. The analysis also detected the highly-associated words and hashtags, and different user communities and how they are connected. Business implications of the findings and limitations are also elaborated.

INTERNET OF THINGS, SOCIAL MEDIA, AND BUSINESS

The term, Internet of Things (IoT) is no more an exclusive term among the technological elite circles, but have started appearing in the popular media mediums. As the usage of Internet is exploding in all possible devices including every day ones, almost all technological businesses are investing to develop products based on IoT and its services. A Consortia have been formed to define the framework and standards for all things related to IoT (Wortmann & Flüchter, 2015). IoT broadly refers to the networked interconnection of day to day objects that are often equipped with ubiquitous intelligence (Xia et al., 2015). It is a network of tangible objects – devices, wearables, vehicles, etc. with sensors, software and network connectivity, which facilitate the collection and exchange of data between the objects via the internet or wireless communication systems. It has the capability to integrate day-to-day operations of people in the Internet, resulting in future possibilities of numerous cutting edge technological capabilities.

IoT is going to play a very serious role in the days to come. Among many impressive estimates (Greenough, 2014; Research and Markets Ltd, 2014) in 2019 IoT is expected to be ‘more than double the size of the smartphone, PC, tablet, connected car, and the wearable market combined’ and ‘will result in \$1.7 trillion in value added to the global economy’ (Greenough, 2014). Another estimate (Bauer et al., 2014) projects that 26-30 billion objects shall be connected to the IoT in 2020. IoT technologies will find wide applicability in many productive sectors including, e.g., environmental monitoring, health-care, inventory and product management, workplace and home support, security and surveillance (Miorandi et al., 2012) and may act as the institutional drivers for business information management. It is expected to hit the majority of the population by provisioning for a multitude of intelligent services like crowd sensing, identification, surveillance, monitoring, and location tracking with a very high revenue opportunity for service providers.

The interconnection of billions of devices and applications through IoT in the future is expected to throw many challenges at the practitioners. For example, the very large quantum of data resulting from the interconnections will offer tremendous insights to the businesses, if managed, apart from throwing up challenges to the practitioners. It is therefore important for the people, who are directly involved with this technology, to gain consumer, market and research insights by understanding the recent challenges, developments and trends in IoT.

Social Media (SM) platforms enable two-way interaction between users through electronic means and of predominantly user generated content. The content can be of different forms. For instance, YouTube is only for videos and Instagram is for images. They are being used by both ruling or industry elites and common people to share, learn, question and discuss various things happening around. As more and more number of users are moving towards SM platforms, businesses find it imperative to include them in the growth strategies.

Almost all businesses now invest in SM management and consider the user generated content as one of the important ways to gain insights regarding their products, services and brand perceptions. Its common to see businesses using of SM platforms like Twitter and Facebook to promote their products and also for other activities including the identification of potential customers, grievance redressals and many more.

As the IoT is growing exponentially, businesses are keen to exploit this emerging opportunity. Apart from discussing among themselves, practitioners are looking forward for insights emerging from discussions in the public space. These discussions would offer insights on the trajectories of the domain, concerns of the people and expectations in terms of product offerings, among many things. The extant research towards this direction appears to be scant. The present paper attempts to fill the gap.

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