

# USER RATINGS WITH COMMENTS TO REVIEW COMPANIES' PRODUCTS AND SERVICES: A NEW MODEL

Baha Elamin<sup>1</sup>, Mohammad Tabrez Quasim<sup>2</sup>

<sup>1,2</sup>Department of Computer Science, Faculty of Computing and Information Technology,  
University of Bisha ,Bisha ,Saudi Arabia

[bmelamin@ub.edu.sa](mailto:bmelamin@ub.edu.sa), [mtabrez@ub.edu.sa](mailto:mtabrez@ub.edu.sa)

**ABSTRACT**— A Online Company's, products and Services ratings play an important role in helping consumers to select the best desirable available through the internet. As well as the failure to organize the assessments of most companies, services, and products offered on the Internet in an organized and co-ordinated manner. As for the methodology, an examination of the current Rating System used in Mobile App Stores was reviewed and the review systems were followed. In the context of the solution, all the services provided through the Internet have been classified into companies, services, and products in a Model, in order to preserve the time, effort and money used by this model . The latest search engines and different sites are not enough to provide research results that satisfy the researchers, most often about the assessments of users before the various services over the Internet and the reason for this is due to lack of specialization in the various assessments, and these are obstacles that lead to wasting a lot of effort, money and time to research recommendations.

**Keywords**— Rating System, User reviews, Rating Companys' Rating services, and Rating products

## I. INTRODUCTION

Recommending appropriate product things to the target user is changing into the key to make sure continuous success of ecommerce [1]. Background on the idea of basic research Online product ratings usually play a helpful role in informing customers once they are creating buying selections [2]. Consumer reviews and ratings of product and services become present on the net everywhere [3]. The main purpose of this research to make more organized and simple to save more effort, time and money to the consumer. The Internet is becoming a major avenue for corporate users and other people's business transactions. Retail e-commerce sales in 2014 reached \$236.9 billion. Most American Internet users search for product information online and make daily online purchases. The Internet also offers criminals opportunities to target victims and attack them. Criminals can infiltrate personal online accounts of victims and then create a customized scam emails to benefit the victims. The anonymous online environment makes identifying such fraudulent samples difficult for users. The reported financial loss of Internet scams in 2014 was over \$800 million[4]. the use of the Internet to make our lives easier, but it takes a long time to navigate on the internet to search for some basic information and task for some, in order to avoid the loss of many of the time, effort and money and avoid fraud and deception mall is most commonly deployed these days on the Internet, the idea of the project, which is based on the monthly classification of the various institutions that provide various services to its clients from various parts of the world using Big Data, in order to obtain the best services provided through the Internet. The recommendation system is being studied on souq.com, an Amazon company. The share of on-line reviews submitted by mobile redoubled at a really high rate over time higher than the expansion rate of these submitted by desktop[5].

Online reviews with the expansion of online media, modern users often and actively share their opinions on product and services with others on varied online platforms like product reviews, blogs, Twitter and wikis. This kind of communication is given in 'reviews' and also the contents area unit considered Word of Mouth. Word of mouth is outlined as 'all informal communications directed at different customers concerning the possession, usage, or characteristics of explicit merchandise and services or their sellers'. Compared with ancient advertising like TV and newspaper ads, electronic word of mouth (eWOM) is

perceived by customers as being additionally credible than personal signals, and also the info is far additional simply accessible through social networks. not like ancient word of mouth, online word of mouth or eWOM has a way bigger reach to different users, and supply rather more richness in contents. User's area unit able to share their online reviews mistreatment footage and even videos. What is more, eWOM is in a position to combination each positive and negative info on a web review web site from totally different sources, whereas ancient word of mouth is barely able to capture one piece of either positive or negative info. Previous studies have shown that eWOM is in a position to have an effect on the sales of merchandise[6].

Businesses nowadays operate and associate more and more competitive and dynamic setting. Historically, makers contend with one another by lowering their product prices and having higher product qualities. However, competition on prices and product qualities is turning into tougher as makers move from giving standardized product and services to one that focuses on customizations. So as to realize competitive benefits over their rivals, makers currently aim to enhance the efficiencies of them by having an improved understanding of their client demands.

Today on the Internet it is possible to get benefits from various companies around the world, it is possible that some of these institutions circumvent the rapid gain of visitors to commercial and service sites which leads to the loss of more time and money for the person wishing the service provided. Safety has become a significant issue and relates to a variety of activities together with on-line privacy, cyberbullying, exposure to violent content, exposure to content that foments exclusion and hate, contact with strangers on-line, and coarse language [7]. In Europe, 3.5 million purchasers are evaluated to have been influenced by membership traps in the course of the last three a long time. This is more every now and again the case now than at any time in recent memory because of computerized development which offers more chances to impart and assemble data from customers [8]. To stay away from these practices and access to high-quality and fast service through the Internet from around the world must be using Recommender System Technology.

Of course, the model is intended to provide ratings for the various institutions and service provider, and compared to the valuations on the sites of companies or institutions that provide services are large, where some of the courtesies or inaccurate because the client did not deal with the service provided for a longer period and the final recommendation

in them, To take into consideration the users of the service provider evaluate the institution itself, here the situation is completely different and the assessment is more realistic and away from the courtesies and at the same time take the client enough period through which he can provide the correct assessment of the institution or service provided.

As organizations increase their investment in social media marketing (SMM), it is becoming increasingly important to evaluate these techniques [9]. The rating system can be defined as a set of best practices assess the sustainability assessment of a series of indicators [10]. A number of groups have developed on Facebook that addresses the issue of online scamming. Their aim is to share the online profiles developed by scammers and to provide up-to-date information on how people can protect themselves from scams. A number of teams have developed on Facebook that addresses the difficulty of online scamming. Their aim is to share the net profiles developed by scammers and to supply up-to-date info on however individuals will protect themselves from scams. These teams square measure offered for anyone to locate on Facebook by writing in a very keyword search. There square measure sites that focus on scammers additional usually and sites that specialize in an additional niche or specific forms of scams [11]. A recommender system is something that every website or app that provides a reliable interface of the user must have. It prevents the user from wasting time in segregating what he needs and encourages efficient exploring. Various factors help to acquire the data of user interest and utilize them in building a system which recommends them on the basis of the profile of their activities and interest created. Semantic web helps to create protocols for an ontology that defines the type and efficiency of the recommender system that we will use. Also, various principles help to develop the same.

## **II. PROBLEMS:**

Scams and other malicious attempts to influence people are continuing to proliferate across the globe, aided by the availability of technology that makes it increasingly easy to create communications that appear to come from legitimate sources[12]. The problems faced by the majority of people seeking a recommendation for the service of a company or similar failure to obtain feedback effectively, which significantly affects the process of taking the right decisions in the various transactions or purchase, resulting in conflicting views and seize the right decision in a timely manner , And is very noticeable in the searches on the search engine Google, there is no specific method in clear form of the recommendations for the researcher, but Iyad is located in major commercial sites such as Amazon, the souq.com, Booking. and similar, and the problems we face here neutrality Neutral evaluation of the company, product or service to solve these problems.

## **III. OBJECTIVES: -**

One of the important goals in this research is to maintain the time wasted for people seeking a recommendation or feedback helps them to take the right decision for a particular service, a company wishing to deal with them and have no background on them, which is of course wasting a lot of time and in many of the lack of obtaining the desired result in relation to the lack of organization information required image and its presence in different locations in unregulated images. It is important to provide a great deal of

effort for the person who wants the service by having it in one place, in an orderly manner, to help him to make right decision, and to provide a lot of money wasted in such operations by dealing with institutions, products or services guaranteed and known to many who give positive feedback. It is also important to develop this process and make it more neutral, specialized and dynamic in order to give recommendations of high quality and effectiveness at the same time.

## **IV. RELATED WORK**

### *A. Study of Alex and colleagues in 2018, Socially Nudged: A Quasi-Experimental Study of Friends' Social Influence in Online Product Ratings*

Social-networking functions are progressively embedded in online rating systems.

These functions alter the rating context within which shopper ratings are generated. In this paper, we have a tendency to through empirical observation to investigate online friends' social influence in online book ratings. Our quasi-experiment analysis style exploits the temporal sequence of Social-networking events and ratings and offers a replacement technique for distinctive social influence whereas accounting for the homophily impact. We discover rating similarity between friends is considerably higher when the formation of the friend relationships, indicating that with social-networking functions, online rating contributors are socially nudged when giving their ratings. Extra exploration of contingent factors suggests that Social influence is stronger for older books and users UN agency have smaller networks, and relatively more modern and very negative ratings forged a lot of salient influence. Our study suggests that friends' social influence is a vital thought once introducing social-networking functions to online rating systems[13]

### *B. Study of Maria N and colleagues in 2016, Web mining-based framework for solving usual problems in recommender systems. A case study for movies' recommendation*

These models are prompted by information mining calculations utilizing as info information both item and client ascribes organized by a specific area philosophy. Moreover, the disconnected model enlistment maintains a strategic distance from versatility issues in suggestion time and the proposition of utilizing acquainted order strategies furnishes an approach to managing the sparsity issue. Various strategies have been proposed to give clients more compelling suggestions, from the customary cooperative sifting ways to deal with complex web mining methods, be that as it may, some essential downsides are as yet display in current recommender frameworks. Web recommender frameworks have been the focal point of escalated look into over the most recent couple of years; be that as it may, despite everything they include a few inadequacies, for example, adaptability, sparsity, top notch and chilly begin issues. These models are utilized for prescribing non-appraised items or for making suggestions to new clients, maintaining a strategic distance from thusly the primary rater and cool begin issues, individually. Interestingly, abnormal state models require web information commented on with semantic data as indicated by the characterized philosophy[14].

C. *Study of Akter and colleague in 2016, Big data analytics in E-commerce: a systematic review and agenda for future research*

The examination mirrors that once BDA and its degree are very much characterized; unmistakable attributes and sorts of huge information are surely known, and challenges are appropriately tended to, the BDA application will expand business esteem through encouraging the unavoidable utilization and quick conveyance of bits of knowledge crosswise over associations. By and large, the discoveries of the investigation orchestrate differing BDA ideas (e.g., the meaning of huge information, types, nature, business esteem, and pertinent hypotheses) that give further bits of knowledge along the cross-cutting examination applications in web-based business. The paper displays an interpretive structure that investigates the definitional perspectives, particular attributes, types, business esteem and difficulties of BDA in the internet business scene[15].

D. *Study of Markus and colleagues in 2016, Insights into Suspicious Online Ratings: Direct Evidence from TripAdvisor*

Applying quantitative analytics, we find three important results: (1) the gap between overall rating and individual ratings does exist and is significant, especially among the lower-class hotels; (2) the proportion of suspicious ratings is about 20% at a standard of 0.5; and (3) reviewers who tend to post excellent ratings are less likely to generate big gaps when posting ratings. Second, although we have computed the proportion of suspicious ratings on the basis of different gap standards, we cannot confirm which standard is the reality: In other words, how big the gap should be before we can regard a review as a low quality the review is still unknown. In our research, we examine empirical evidence of suspicious online ratings based on 41,572 ratings on TripAdvisor. First, the method employed in this research to ascertain suspicious reviews cannot be applied on most e-commerce platforms due to differences in web design, so future research should do more in this field[2].

E. *Study of Raffaele in 2016, what makes an online consumer review trustworthy?*

Arbitrator factors proposed in this investigation, researchers could consider diverse mediators, for example, benefit compose, buyer identity, travel understanding, and hazard taking conduct. At last, future investigations could survey the effect that appears reliable and conniving audits have on customers' states of mind towards brands and buyer audit sites and conduct. This examination has discovered that purchaser observations may fluctuate crosswise over various kinds of customers and sites on which client produced content is posted (e.g. corporate versus to sum up the consequences of this investigation, new research ought to embrace a socially unique example or spotlight on clients of various sites and on an alternate item or administration classification (e.g. visit administrators, rental offices). In this manner, future research could receive a longitudinal approach and examines customer view of trust at various focuses in time and over an assortment of stages distributing client produced content.[16]

F. *Study of Jannach and colleague in 2016, Recommendations with a Purpose*

The abnormal state looks into the system proposed in this paper is expected to fill in as a way to approach these central viewpoints structured by considering the operational, as well as the vital point of view for recommender frameworks, outline, and assessment. The reason for recommenders is frequently condensed as "enable the clients to discover important things", and the transcendent operationalization of this objective has been to center around the capacity to numerically appraise the clients' inclinations for concealed things or to give clients thing records positioned in understanding to the assessed inclinations. The recommender frameworks inquire about the field has achieved a specific level of development, specifically regarding its standard, set up operationalization of the proposed issue. In this paper, we talk about a structure of suggestion objectives and purposes and feature conceivable future bearings and difficulties identified with the operationalization of such elective issue details.

G. *Study of John and colleagues in 2015, What can big data and text analytics tell us about hotel guest experience and satisfaction?*

This examination expects to investigate and show the utility of enormous information investigation to better comprehend vital neighborliness issues, specifically the connection between lodging visitor experience and fulfillment. Future research may consider applying strategies for triangulation to numerous wellsprings of information to approve the semantic structure of visitor involvement with a specific end goal to build up more thorough learning about visitor fulfillment utilizing enormous information examination. In particular, this investigation applies a content explanatory way to deal with a substantial number of buyer surveys extricated from Expedia.com to deconstruct in visitor encounter and look at its relationship with fulfillment evaluations. In the first place, this examination exhibited the handiness of enormous information investigation in recognizing novel examples of lodging visitor conduct utilizing customer produced content promptly accessible on the Internet. Third, from a viable perspective, this investigation offers something to think about for lodging administration and promoting in that our examination recommends cleanliness factors are fundamental in inn administrations without which the visitor can't work as a co-maker of the experience or possibly can't completely appreciate the experience [17].

H. *Study of Wouter Hensens in 2015, the future of hotel rating*

Reason – The motivation behind this paper is to give an understanding of the eventual fate of lodging rating. It surveys the effect of online life, the innovation that gives coordination of information to the customer and the lodgings, and the manner in which that rating body may react to the changing condition on how lodgings are chosen and looked into. Plan/system/approach – By evaluating current patterns, rehearses and mechanical potential outcomes, the effect of online surveys on traditional inn rating frameworks are anticipated into what's to come.

Discoveries – The paper predicts full incorporation of traditional rating frameworks with online visitor surveys from the distinctive visitor survey stages prompting more prominent straightforwardness for the purchaser and better situating open doors for imaginative inns. It is additionally anticipated that those regular rating frameworks that don't look for mix and arrangement will see a proceeded with a drop in lodging cooperation and will stop to exist. Innovation/esteem – Little research has been done on the connection between online visitor audits and customary in rating frameworks. The paper exhibits new experiences into how to present and future patterns impact the manner by which buyers select lodgings and how this impacts how inns are evaluated.

*I. Study of Jai and colleagues in 2015, Big Data Analysis: Recommendation System with Hadoop Framework*

In this paper, we have proposed a suggested framework for a lot of information accessible on the web as appraisals, audits, sentiments, dissensions, comments, input, and remarks about anything (item, occasion, individual and administrations) utilizing Hadoop Framework. The resultant chart is demonstrating that at whatever point document measure is expanding the execution time isn't expanding in a similar proportion and we realize that information estimate that is as appraisals, positions, survey, the input is expanding definitely. Data as audits, sentiments, input, comments, and protest regarded as Big Data can't be utilized specifically for suggestion framework.

The scientist profited from past investigations in advancing the hypothetical system and guiding it to a portion of the primary subjects of the examination. The accompanying is the conclusion:

*J. Study of Ahmed and colleagues in 2016, An Examination of the Current Rating System used in Mobile App Stores*

Unlike product on Amazon, mobile apps area unit endlessly evolving with New versions of apps within the app store exchange the recent versions at a fast pace.

Nevertheless, several app stores still use the Amazon-style scoring system for his or her Hosted apps, wherever each rating assigned to associate app over its entire period is Aggregated into one rating that's displayed within the app store (which we have a tendency to decision store ratings). So as to look at if the store-rating of an associate app is ready to capture the changing user satisfaction levels with relation to new versions of the app, we mined the store-ratings of over ten, 10,000 distinctive mobile apps within the Google Play market, every single day for a whole year. We discover that several apps do increase their Version-to-version rating, whereas the store-rating of the associated app is resilient to fluctuations once the associate app has gathered a considerable range of raters. Therefore, we have a tendency to conclude that this store-rating of apps isn't dynamic enough to capture the ever-changing user satisfaction levels related to the evolving nature of apps. This resilience is a major downside that may discourage developers from up the standard of their app[18].

*K. Study of Christopher and colleagues in 2017, Securing online privacy: An empirical test on Internet scam victimization, online privacy concerns, and privacy protection behaviors*

The Internet is turning into a serious avenue for the business transactions of company users and alternative people. E-commerce retail sales reached \$236.9 billion in 2014. A majority of yank net users hunt for on-line product data and build online purchases on a day today. The net additionally provides opportunities for criminals to focus on and attack victims. Criminals will infiltrate victims' personal online accounts then produce tailored scam emails to realize edges from the victims. The anonymous online surroundings make it troublesome for users to spot such deceitful probes. The according loss of net scams was over \$800 million in 2014. Net scams aim to bunco victims, with scammers applying totally different strategies to steal victims' personal data and trick them into creating money payments. One in all the known styles of net scams is purchase fraud, within which scammers collect net users' MasterCard data and PIN numbers that they then use to withdraw cash from the victim's money account. In another form of fraud, criminals build pretend websites to induce victims with data supposed to look to be legitimate and reliable. Criminals supply pretend product at extraordinarily low-cost costs and supply pretend positive shopper comments to draw in victims[4].

*L. Study of M. Mariani and colleague in 2018, Effects of the Booking.com rating system: Bringing hotel class into the picture*

The purpose of this study is to continue the discussion initiated by Mellinas et al. (2015, 2016) on the consequences of the Booking.com classification system and a lot of wide on the utilization of the OTA as an information supply in educational touristy and cordial reception analysis. we have a tendency to enrich and complement the initial work by Mellinas et al. (2015) by trial and error work the consequences of the Booking.com classification system on the distribution of edifice ratings for the general population of hotels settled in London over 2 years. Supported over one.2 million online reviews, we have a tendency to show that the general distribution of edifice scores is considerably left-skewed. Moreover, we discover that the degree of imbalance is completely related to edifice class: lower-class hotels exhibit distributions of ratings that are statistically less skew than higher-class hotels[19].

This research aims to design Because some of the institutions are determined to tamper with the result of the valuation for their products on the quantitative site, for example, that you offer high rating first or positive comments in the first and put a negative evaluation at the bottom, in this case, is a significant impact on the visitor site or Jupiter, However, if there is a model for evaluation only if the products, companies or services provided in this case are the services while maintaining the time and money for the customer by not searching the Internet in search of the service or Good products results of the assessment confirmed and correct, and as previously mentioned, the

greater the number of residents of the service, institution or product over time that gives a good perception of the service provided and through it Hard to manipulate, and pure It is important to note that the evaluation of the service in one place, which does not work a number of pages for the same service or product to assess, so we can avoid fraud and commercial fraud and access to quality.

There were many applied and theoretical experiments, for example on souq.com. The tests were on the evaluation and commenting system. The most important results were the higher the rating 4 and the higher the better, the more the presence of products of the same type, Because the difference in quality, which is important to the number of resident residents as the number of high population gives the product in the product, but the condition is not only the number of residents but the same values must be higher than 4 stars and above.

The opinion of different customers, WHO post their experiences in online reviews, provides info from a supply that's perceived as a lot of freelance and trustworthy than company info, each the degree and therefore the valence of online reviews have an effect on shopper behavior; many studies have found that the valence of on-line reviews affects business performance. Positive client reviews increase business results, whereas negative on-line reviews decrease them [20].

Classification of enterprises according to the services provided. Avoid institutions that manipulate the services they provide. The information required about the company, service or products is available in one place.

Having a specialized system to deliver highly recommended customer feedback is very important for them and saves a lot of wasted time and money at the same time. This is because the system specializes in making recommendations and evaluating all kinds of institutions, products and services from around the world, now the process of searching for certain information as the valuation of some products or service is sometimes unclear as to the absence of a specialized site to make recommendations, this model will introduce recommendations up to date[19].

## V. DISUSSION AND CONCLUSION

It is clear to us that the use of the Internet and e-commerce recommendations is very important In order to avoid the widespread commercial fraud and the number of establishments and institutions that are established daily through the Internet for the purpose of profit from trading on the Internet, but trade through the Internet now need to be a great effort of experience and time also, And through many previous experiences and studies, it became clear the importance of the recommendations provided, which preserves many wasted efforts, time and money for people seeking effective service in a timely manner and this service was not a producer or any kind of different types of services every period needed to assess the purpose of development and competition, Of course, the assessment only comes through the practice of any person using the service provided, and the method of evaluation needs to be developed in order to be presented in a simplified and clear for the person seeking this service or product, and this is the goal of the search to be made effective recommendations through From around the world, It is important to take care of such a model for the purpose of developing it, make

recommendations that are of great benefit to people who desire quality services on the reputation of organizations with distinctive services and at the same time maintain competition among them, A model reviews the order of quality of service provided by various institutions Finally, this system needs to be developed in order to make recommendations more professionally and at the same time maintain the spirit of competition among the various companies that provide their services on the Internet.

The neutral hypothesis has been proven through practical and applied research. It is necessary to have a neutral system that evaluates different companies, services, and products. In the light of the current corporate websites, the encyclopedia contains a system that exists on the site, but in the world of the Internet, we did not have a dedicated system designed to evaluate all of these companies, services, and products, so a neutral system was developed for different assessments.

The system has proven to save a lot of wasted time and effort through many of the tests that have been applied and compared in online searches to evaluate a product or company and search in Moodle. The system has helped to a large extent avoid fraudulent companies, manipulative and at the same time to obtain the required service effectively and at the best prices. The system has saved a lot of money, which is largely lost in fraud and commercial manipulation. The neutral hypothesis has been proven through practical and applied research. It is necessary to have a neutral system that works on evaluating different companies, services, and products. In view of the sites of the companies currently on the network, the encyclopedia contains a system that resides on the site, but in the internet world we did not get the system is designed to assess all of these companies, services, and products, so this system was developed neutral and dedicated to the assessments.

It has been proven that the system will save a lot of lost time, money and effort through different experiences that have been applied and compared in the online searches to comment the product, company and services. The reason for this is because it does not have a system of assessments on the Internet dedicated to the evaluation of the final product, the different companies or companies themselves, there are assessments of course, but specialized in a particular field or a specific Shi system or site dedicated to the various assessments did not qualify for this system has been applied. To increase the efficiency of evaluation performance, the new evaluation system is more efficient and professional. This has been proved in comparison with the evaluation system that is available to companies offering different services. The neutral hypothesis has been proven through practical and applied research. It is necessary to have a neutral system that works on evaluating different companies, services, and products. In view of the sites of the companies currently on the network, the encyclopedia contains a system that resides on the site, but in the internet world we did not get the system is designed to assess all of these companies, services, and products, so this system was developed neutral and dedicated to the assessments.

## VI. RECOMMENDATION(FUTURE WORK )

It is important to have such models on the Internet in proportion to the availability of information in a wide and unorganized about the institutions, products, and services provided by different countries, so there must be a resident

of these services provided in a formal way helps the researcher in providing a lot of effort, time and money, and of course over time A model needs to develop in order to keep up with progress and provide a more efficient and professional services.

This modal helps the institutions to provide their services satisfactorily to the client and more professional because there is a more professional evaluation of all in one place and that the resident in this model user service, which dealt with, which helps in that the assessment is more effective, and now looking for distinctive services It can be found in one location, which saves him a lot of wasted time.

The recommendations are as follows:

1. An important recommendation is to develop customer recommendations using expert systems.
2. Develop the recommendation process by giving a percentage, for example, 85% as a percentage that helps the visitor to evaluate effectively
3. Provide the top five in each of the organizations, services, and products, that will be every Year or Month.
4. Division of the site according to the countries and regions of the countries and according to the company, service or product located in the region for the purpose of evaluation.

Of course, it is preferable to use big data to provide effective assessments with high credibility.

Looking for the best product offerings currently available, any customer who wants a particular service or product that is searched for in the engine shows him the current product offer.

## REFERENCES

- [1] L. Qi *et al.*, "Structural Balance Theory-based E-commerce Recommendation over Big Rating Data," vol. 7790, no. c, 2016.
- [2] M. Schuckert, X. Liu, and R. Law, "Insights into Suspicious Online Ratings: Direct Evidence from TripAdvisor," *Asia Pacific J. Tour. Res.*, vol. 21, no. 3, pp. 259–272, 2016.
- [3] O. Besbes and M. Scarsini, "On Information Distortions in Online Ratings," *Ssrn*, no. February, 2013.
- [4] H. Chen, C. E. Beaudoin, and T. Hong, "Securing online privacy: An empirical test on Internet scam victimization, online privacy concerns, and privacy protection behaviors," *Comput. Human Behav.*, vol. 70, no. January, pp. 291–302, 2017.
- [5] M. M. Mariani, M. Borghi, and U. Gretzel, "Online reviews: Differences by submission device," *Tour. Manag.*, vol. 70, no. September 2018, pp. 295–298, 2019.
- [6] A. Y. L. Chong, E. Ch'ng, M. J. Liu, and B. Li, "Predicting consumer product demands via Big Data: the roles of online promotional marketing and online reviews," *Int. J. Prod. Res.*, vol. 55, no. 17, pp. 5142–5156, 2017.
- [7] G. C. Zilka, "Awareness of eSafety and Potential Online Dangers among Children and Teenagers," *J. Inf. Technol. Educ. Res.*, vol. 16, pp. 319–338, 2017.
- [8] V. Hietanen, "CRIME PREVENTION- HOW TO AVOID SUBSCRIPTION TRAPS," vol. 3, no. 2, pp. 239–249, 2018.
- [9] B. J. Keegan and J. Rowley, "Evaluation and decision making in social media marketing," *Manag. Decis.*, vol. 55, no. 1, pp. 15–31, 2017.
- [10] J. M. Diaz-Sarachaga, D. Jato-Espino, and D. Castro-Fresno, "Application of the Sustainable Infrastructure Rating System for Developing Countries (SIRSDEC) to a case study," *Environ. Sci. Policy*, vol. 69, no. September, pp. 73–80, 2017.
- [11] T. Owen, W. Noble, and F. C. Speed, "New Perspectives on Cybercrime," *New Perspect. Cybercrime*, pp. 213–240, 2017.
- [12] E. J. Williams, A. Beardmore, and A. N. Joinson, "Individual differences in susceptibility to online influence: A theoretical review," *Comput. Human Behav.*, vol. 72, pp. 412–421, 2017.
- [13] C. A. Wang, X. M. Zhang, and I. Hann, "Socially Nudged : A Quasi-Experimental Study of Friends ' Social Influence in Online Product Ratings Socially Nudged : A Quasi-Experimental Study of Friends ' Social Influence in Online Product Ratings," no. May, pp. 0–15, 2018.
- [14] M. N. Moreno, S. Segrera, V. F. López, M. D. Muñoz, and Á. L. Sánchez, "Web mining based framework for solving usual problems in recommender systems. A case study for movies' recommendation," *Neurocomputing*, vol. 176, pp. 72–80, 2016.
- [15] S. Akter and S. F. Wamba, "Big data analytics in E-commerce: a systematic review and agenda for future research," *Electron. Mark.*, vol. 26, no. 2, pp. 173–194, 2016.
- [16] R. Filieri, "What makes an online consumer review trustworthy?," *Ann. Tour. Res.*, vol. 58, no. May, pp. 46–64, 2016.
- [17] Z. Xiang, Z. Schwartz, J. H. Gerdes, and M. Uysal, "International Journal of Hospitality Management What can big data and text analytics tell us about hotel guest experience and satisfaction?," *Int. J. Hosp. Manag.*, vol. 44, pp. 120–130, 2015.
- [18] W. Hensens, "The future of hotel rating," *J. Tour. Futur.*, vol. 1, no. 1, pp. 69–73, 2015.
- [19] M. M. Mariani and M. Borghi, "Effects of the Booking.com rating system: Bringing hotel class into the picture," *Tour. Manag.*, vol. 66, pp. 47–52, 2018.
- [20] M. Academic *et al.*, "Architectures of Knowledge : From Reusable Assets to Unique Outcomes," *Inf. Syst. Res.*, vol. 23, no. 4, pp. 1–34, 2014.