

## The Impact of Content Produced on Instagram Social Network on Successful Economic Services of Isfahan in Corona Crisis Using a Combination of Genetic Algorithm and Forbidden Search Algorithm

Saeid Abdolmanafi 

Assistant Professor, Department of Business Management, Payame Noor University, Tehran, Iran

Mohammad Majdameli 

Professor, Department of Economics, Faculty of Economics and Accounting, Islamic Azad University, Tehran Markaz Branch, Iran

Aliakbar Neghabi 

Assistant Professor, Faculty of Computer Engineering, Sabzevar Branch, Islamic Azad University, Sabzevar, Iran

Somayeh Izadi 

Ph.D. Candidate in Information Technology Engineering, Electronic Commerce, Islamic Azad University, Sabzevar Branch, Iran

### Abstract

**Purpose:** The purpose of this research was to provide a model for choosing the best content for the activity of service guilds.

**Method:** In inferential statistics, the K-S test is used for the normality of research hypotheses. For this purpose, Pearson's correlation coefficient and linear regression tests have been used through SPSS 21 software, and the best content generated using genetic algorithms and forbidden search were introduced.

**Findings:** Analysis of research and implementation results with two collective intelligence algorithms shows that Instagram has a positive and significant

– Corresponding Author: Dr.manafi@yahoo.com

**How to Cite:** Abdolmanafi, S., Majdameli, M., Neghabi, A., Izadi, S. (2024). The Impact of Content Produced on Instagram Social Network on Successful Economic Services of Isfahan in Corona Crisis Using a Combination of Genetic Algorithm and Forbidden Search Algorithm, *International Journal of Digital Content Management (IJDCM)*, 5(9), 236-258. DOI: 10.22054/dcm.2022.68395.1105

effect on all four dimensions and thus leads to the success of the service classes that have used Instagram.

**Conclusion:** In this article, a combination model of genetic algorithm and forbidden search algorithm was chosen for users so that the best content, which of course does not contain malicious ads and cookies, etc., is introduced for the continuation of the service industry.

**Keywords:** Brand and Advertising Dimensions, Genetic Algorithm, Instagram, Media Dimensions, Prohibited Search Algorithm, JEL: C8, C41, C46, D91, D86.



## **Introduction**

Today social networks are easily accessible to everyone and have penetrated among families, so this media is considered as an important and powerful tool in internet marketing and branding. Also, through this media, brands can easily be shared at a cost compared to traditional methods, messages, goals and programs to users and audiences. The goal is to create a suitable and special place in society for their brands. As the gap between producers and consumers narrows, producers become aware of the needs, wants, and customs of consumers, reducing the necessity for extensive marketing and market management. However, in the current economic landscape where many large companies face limitations on their business activities, global production and distribution require significant marketing efforts. The Instagram social network platform with its facilities provides a good space for different businesses and companies to advertise on the network and tempt users or customers to buy more services or goods. One of the most important features of social media marketing is the creation of a user-to-user message chain.

By using content sharing and attracting users' attention, you can easily convey your messages, brands, company or organization names to your target community quickly and encourage them to share the contents. As the intended messages are published and disseminated word –of –mouth among users through this chain happens a sense of trust will be created among them. This trust will indirectly affect the value of the messages to the audiences more than before. In the meantime, conditions will be provided to exploit the potential and actual audiences.

It can be said that advertising is the core stone of marketing strategies. Evaluating the impact of marketing activities is a fundamental task which is the responsibility of the management. Being aware of this impact can cause the success of the companies and prevent failures. Forbidden search is a neighborhood search method which is used to find the best answer among the neighbors and replace it with the answers. In order to improve the effectiveness of the search process, the rejection of local information (such as the present value of the competency function) and some information related to the search process should be preserved. This systematic use of memory is an essential feature of forbidden search. In the genetic algorithm, firstly a number of individuals are randomly selected as the initial population and the degree of competence of each of them is determined based on the competency function.

After that a number of individuals are born based on the degree of

competency as the selected parent so new children are born. New children are included in the population and a new population is created. This process continues until the termination is met (Anderson, 2005).

The general steps of genetic algorithm are:

- Initialization: production of individuals for the initial population.
- Selecting parents: Selecting pairs of parents for the exchange operator.
- Exchange operator: Generate two children from each parent pair.
- Mutation operator: Perform a mutation operator on each child.
- Population change: Selecting children for the next generation population
- competition of the algorithm: if the creation of generations is completed, go to step two.

The set of information that is collected about a particular entity is generally called content. Now in the case of mobile advertising, this set of information depends on the characteristics and position of the customers which can be collected explicitly (directly from the users) or indirectly (the system secretly gathers its needs according to the users' behavior). Therefore, the best information can be obtained and the best option for the customers can be selected. (Audi, 2008).

The content management cycle of Instagram based on information technology includes the activities of acquiring, registering, transferring, creating and applying customer needs. Achieving results includes a set of activities that are done to gain visits and sales to new customers. Activities such as the members' participation and on-line participation programs are the cooperation of IT managers with Instagram software. Content registration and documentation includes a set of activities that are done to promote promotional content on Instagram. Registration activities include activities such as using database to record the content produced by the page manager and the experience –documentation of successful and unsuccessful managers. Knowledge transfer is known as transferring a set of activities which are performed by previous managers to new ones. Activities like training sessions and discussion sessions for providing experiences and method of defining content, eagerness and participation of loyal customers for cooperation and collaboration to improve methods of defining content, using databases and providing managers with knowledge for all customers openly show the extent of managers' efforts to convey their knowledge.

Content creation involves the set of activities through which content is created and produced by a manager or even a customer. Activities such as rewarding, encouraging innovation, entrusting projects and motivating

managers to come up with new ideas, openly discussing the experiences and failures of managers on Instagram and other applications like Telegram, etc. help to form learning groups which is one of the activities that facilitate the creation of new content on Instagram.

### **Literature Review**

Koosha et al. (1999) modeled the effect of social media attractiveness on individual engagement with social commerce: a study of Instagram social commerce pages. In this study, an attempt has been made to examine the main pattern of the effect of social media attractiveness on the development of social business among Iranian Instagram users, using a model of the relationship between social media attractiveness and participation, and at the same time, the relationship between participation and commitment. To discuss about social businesses, considering the variable of aggression, personal interest and based on the results the theoretical model explains 44% of the changes in individual commitment to social businesses. However, the social appealing, informative and visual platform of Instagram increases users' engagement and consequently increases commitment to social commerce.

Kia and Saadat Sirat (1999) to the Iranian users of virtual social media in the decline and construction of moral values of the media; (Study of six events on Instagram). The study was qualitative with an exploratory approach and based on comments and opinions of users.

Moradi and Aghaei (1999) to study the effect of content enjoyment and social relationship enjoyment on Instagram on the customer's intention to buy; explain the mediating role. The purpose of this study was to investigate the effect of content enjoyment and social relationship enjoyment on Instagram network on customer purchase intention; explain the mediating role of customer intensification. Findings indicate that hedging value, compliance and information penetration have a positive and significant effect on customer intensification in the Instagram network.

Also, customer intensification in Instagram network has a positive and significant effect on the customer's intention to buy. This study sought to investigate the effect of common value creation behavior variables for the customer, brand preference, repurchase intention. In fact, the purpose of this study was to investigate the effect of common value creation behavior for the customer on brand preference and customers' intention to repurchase. In addition, the mediating role of the variable of brand preference between the behavior of creating common value for the

customer and the intention to repurchase was investigated. The research results show a positive and significant effect of common value creation behavior for the customer on brand preference and brand preference on repurchase intention. Brand preference also mediates between value creation behavior and repurchase intention.

Abdolhosseini et al. (1998) to the question of what measures are effective in measuring the effectiveness of advertising on the social network Instagram. they paid. To answer this question, in this research, content analysis method has been used and 36 leading researches in this field have been evaluated and an attempt has been made to provide dimensions and components for measuring this effect. The results of this study show that to measure the impact of advertising on Instagram, we can emphasize four dimensions, including dimensions related to advertising, dimensions of biological psychological impact, dimensions related to brand and dimensions related to media. Each of these dimensions includes various components that your researcher has confirmed the relationship between them and the effectiveness of advertising on Instagram. In 1998, Safaei and Atef Yekta studied the effect of social dependence on customer trust in social networks. They sought to discover the trust of Instagram users and also to extract the influence of virtual sales pages on their purchasing decision. The results of the research showed that out of the set of predicted factors, only the number of times a customer checks their Instagram page has a significant effect; he has the level of trust when buying from commercial pages.

In his article, Bar and Tajuddin et al. (2020) state that the higher the quality and quantity of user content production, the better brand image is formed for the consumer. Because the company's image can affect the company's revenue and the consumer's intention to continue, and this impact can be long-term and sustainable.

Sabada and Guai (2019) in their research, which focused exclusively on the economic trust of users, showed that the tangible control of payment methods has a significant impact on customer trust in purchases within the social network.

Foroudi et al. (2019) have shown that due to the participatory and citizenship behavior of customers that creates interaction between companies and customers, it is possible to improve the brand awareness and image of customers and also increase the similarity between customers' desires and needs with products and the company's services paid for and increased customer satisfaction, and as a result encouraged

them to repurchase from the company.

Babajidi and Ofir (2018) in order to study the social motivation affecting social trade, combined mental and collective norms with the aim of assessing social motivation and its future effects on continuous behavior in social trade and showed that the factors affecting social variables in particular, the time spent per visit, emotional experience, and gender can moderate the effects of social norms on business intent.

Gordon et al. (2018) examined the concept of value in behavior that the customer receives value for the quality of his behavior and examined how this concept affects the output of customer behavior, which ultimately led to the importance of marketing in virtual networks. They concluded that the value of the customer's value for his behavior affects his energy behavior.

Shang et al. (2017) found in their research that when users are interested in a topic, they are more likely to discuss it and share messages in this regard; this process intensifies. The resonance phenomenon is created through the responses and reactions that social network users make to a post.

- Main Hypothesis: Information technology has an effect on content management produced in successful economic service industries in Isfahan.
- Sub-hypothesis: Information technology affects the dimensions of advertising in successful economic services in Isfahan.
- The second sub-hypothesis: Information technology has an effect on the psychological aspects of bio in successful economic services in Isfahan.
- Third sub-hypothesis: Information technology has an effect on brand dimensions in successful economic service industries in Isfahan.
- Fourth sub-hypothesis: Information technology has an effect on knowledge sharing in successful economic service industries in Isfahan.

## **Method**

This research is applied in its purpose and utilized a descriptive-survey method. The present study was conducted in the second half of 2021 until the end of April 2022, i.e., during 9 months. The spatial scope of this research is successful economic service classes in Corona in Isfahan. The statistical population of this study is 1206 successful economic service industries in the corona crisis in Isfahan service guilds. Based on the Cochran's formula, 292 people were estimated from multi-class random sampling for the study. To determine the reliability of the questionnaire,

30 questionnaires were distributed and collected in the statistical community. The calculated Cronbach's alpha for the questionnaire in this research is:

**Table 1. Cronbach's alpha coefficients for the research model**

Row	Variable	Cronbach's Alpha
1	hardware	0.85
2	software	0.73
3	network	0.70
4	database	0.74
5	Personnel and management	0.74
6	The whole questionnaire	0.83

According to the table above, Cronbach's alpha coefficient for each component is 0.70 due to higher alpha values than the standard value, so it can be said that the above questionnaires are sufficiently valid.

#### **Inferential analysis of data**

To measure the normality of the data obtained from the questionnaires, Kolmogorov-Smirnov test was used. In the data normality test, the null hypothesis is assumed as follows:

**Table 2. Kolmogorov-Smirnov test results**

Information Technology	Brand dimensions	Dimensions of advertising	Psychological dimensions	Dimensions of media	Result
Kolmogrof The significance level	1.066	0.898	0.901	1.42	0.866
Kolmogrof The significance level	0.206	0.396	0.761	0.34	0.767

As presented in Table 2, the calculated significance level for the components of the produced content and the amount of Instagram was greater than 5%; as a result, the data were normalized and the null



hypothesis was rejected.

**Findings**

The main hypothesis: Information technology on the content produced on Instagram affects successful economic service industries.

- H1: Information technology affects the content produced on Instagram on successful economic service industries.

**Table 3. Pearson Instagram r test on generated content**

	Information technology	Content produced
Pearson IT Correlation	1.00	0.396
Significance level (two domains) Sig		0.000
Number	292	292
Pearson correlation of generated content	0.396	1.0
Significance level (two domains) Sig	0.000	
Number	292	292

**Table 4. Analysis of variance of the main hypothesis related to Instagram variable regression on generated content**

The correlation coefficient		The coefficient of determination	Modified R		Standard error	
0.396		0.157	0.151		0.4081	
Source of changes	Degrees of freedom	Sum of squares	Average of squares	F	Confidence level	Significance level Sig.
Regression	1	4.036	4.036	24.239	95%	0
left over	291	21.682	0.167		Test result: Hypothesis H0 was rejected	
Total	292	25.682				

As seen in Table 4, the coefficient of determination is 0.157, i.e.,

15.7% of the scatter observed in the dependent variable is justified by the independent variable; and according to the obtained level of significance, which is equal to 0.000 and less than the maximum level of significance (0.05), so with 95% confidence, it can be said that information technology on the content produced on Instagram is successful in the service industry. Economy has a positive and significant effect.

**Table 5. Parameter coefficients of the main hypothesis related to the IT variable on the produced content**

Variable title	Non-standard coefficients		standard coefficients	Calculated t	The significance level
	B	Std. Error	Beta		
Width of origin (fixed)	2.717	0.169		16.052	0.000
Information Technology	0.273	0.056	0.396	4.923	0.000

The first hypothesis: Information technology affects the dimensions of advertising on Instagram in successful economic services.

H1: Information technology affects the dimensions of advertising on Instagram in successful economic services.

**Table 6. Pearson r test to determine the correlation of information technology on the dimensions of advertising**

	Information technology	Dimensions of advertising
Pearson IT Correlation	1.00	0.511
Significance level (two domains) Sig		0.000
Number	292	292
Pearson correlation of generated content	0.511	1.0
Significance level (two domains) Sig	0.000	
Number	292	292

**Table 7. Analysis of variance of the first hypothesis related to regression of information technology variable on advertising dimensions**

The correlation coefficient		The coefficient of determination	Modified R			Standard error	
0.511		0.261	0.255			0.746	
Source of changes		Degrees of freedom	Sum of squares	Average of squares	F	Confidence level	Significance level Sig.
Regression		1	25.541	25.541	45.849	95%	0
left over	291	72.42	0.557			Test result: Hypothesis H0 was rejected	
Total	292	97.96					

As seen in Table 7, the coefficient of determination is 0.261, i.e., 1.26% of the observed scatter in the dependent variable is justified by the independent variable. And according to the obtained level of significance, which is equal to 0.000 and less than the maximum level of significance (0.05), so with 95% confidence, it can be stated that information technology has a positive effect on the dimensions of advertising in successful economic services.

**Table 8. The parameter coefficients of the first hypothesis are related to the variable of the impact of information technology on the dimensions of advertising**

Variable title	Non-standard coefficients		standard coefficients	Calculated t	The significance level
	B	Std. Error	Beta		
Width of origin (fixed)	0.941	0.310		3.039	0.003
Information Technology	0.688	0.102	0.511	6.771	0.000

The second hypothesis: Information technology has an effect on the

psychological dimensions of successful economic service

H1: Information technology has an effect on psychological dimensions in successful economic services.

**Table 9. Test - Pearson Information Technology on the psychological dimensions of Table**

	Information technology	Psychological dimensions
Pearson IT Correlation	1.00	0.193
Significance level (two domains) Sig		0.026
Number	292	292
Pearson correlation of generated content	0.511	1.0
Significance level (two domains) Sig	0.026	
Number	292	292

**Table 10. Analysis of variance of the second hypothesis related to regression of information technology variable on psychological dimensions**

The correlation coefficient		The coefficient of determination	Modified R		Standard error	
0.193		0.037	0.030		0.78161	
Source of changes	Degrees of freedom	Sum of squares	Average of squares	F	Confidence level	Significance level Sig.
Regression	1	3.089	3.089	5.056	95%	0
left over	291	79.420	0.611		Test result: Hypothesis H0 was rejected	
Total	292	82.509				

As seen in Table 10, the coefficient of determination is 0.037, i.e., 7.3% of the scatter observed in the dependent variable is justified by the

independent variable. And according to the obtained level of significance, which is equal to 0.026 and is less than the maximum level of significance (0.05), so with 95% confidence, it can be stated that information technology has a positive effect on the psychological dimensions of successful economic services. As a result, Hypothesis H0 is rejected and the researcher's claim H1 is confirmed.

**Table 11. Parameter coefficients of the second hypothesis related to the IT variable on psychological dimension**

Variable title	Non-standard coefficients		standard coefficients	Calculated t	The significance level
	B	Std. Error	Beta		
Width of origin (fixed)	3.212	0.324		9.907	0.000
Information Technology	0.239	0.106	0.193	2.249	0.026

The third hypothesis: Information technology affects the dimensions of the brand in successful economic services.

H1: Information technology affects the dimensions of the brand in successful economic services.

**Table 12. Test - Pearson Information Technology on Brand Dimensions**

	Information technology	Brand dimensions
Pearson IT Correlation	1.00	-0.195
Significance level (two domains) Sig		0.025
Number	292	292
Pearson correlation of generated content	-0.195	1.0
Significance level (two domains) Sig	0.025	
Number	292	292

**Table 13. Analysis of variance of the third hypothesis related to Instagram variable regression on brand dimensions**

The correlation coefficient		The coefficient of determination	Modified R		Standard error	
0.195		0.038	0.031		10.77495	
Source of changes	Degrees of freedom	Sum of squares	Average of squares	F	Confidence level	Significance level Sig.
Regression	1	595.601	595.601	5.130	95%	0
left over	291	15092.95	116.100		Test result: Hypothesis H0 was rejected	
Total	292	15688.55				

As seen in Table 13, the coefficient of determination is 0.038, ie 8.3% of the scatter observed in the dependent variable is justified by the independent variable. And according to the obtained level of significance, which is equal to 0.025 and is less than the maximum level of significance (0.05), so with 95% confidence, it can be stated that information technology has an impact on brand dimensions in successful economic services.

**Table 14. Parameter coefficients of the third hypothesis related to Instagram variable on brand dimensions**

Variable title	Non-standard coefficients		standard coefficients	Calculated t	The significance level
	B	Std. Error	Beta		
Width of origin (fixed)	97.065	9.565		10.148	0.000
Information Technology	-0.260	0.115	-0.195	-2.265	0.025

The fourth sub-hypothesis: Information technology affects the dimensions of Instagram media in successful economic service industries.  
 H1: Information technology affects the dimensions of Instagram media in successful economic services.

**Table 15. Pearson IT test on the dimensions of Instagram media+**

	Information technology	Dimensions of Instagram media
Pearson IT Correlation	1.00	0.108
Significance level (two domains) Sig		0.219
Number	292	292
Pearson correlation of generated content	0.108	1.0
Significance level (two domains) Sig	0.219	
Number	292	292

At the significance level of the two domains, the significance level of Person r test is 0.219 and this level is greater than the minimum significance level which is 0.05, so it can be concluded that there is no significant economic relationship among information technology on the dimensions of Instagram media in successful service industries.

### Simulation of the proposed algorithm

The proposed algorithms are implemented in C # .Net programming language and run on a computer with a Pentium Core i5 processor and AGB RAM with Windows 10 operating system. The most commonly used algorithm is genetics. Therefore, in this research, the genetic algorithm along with the forbidden search algorithm has been used to ban malicious advertisements and language barriers for the user.

**Table 16. Specifications of test data and initial settings**

Test data name	Difficulty	Number of simultaneous ads	Initial population	Number of generations
C1	Easy	3	100	500
	Hard	3		

C2	Easy	3	150	1000
	Hard	3		
C3	Easy	3		
	Hard	3		
C4	Easy	5		
	Hard	5		
C5	Easy	5		
	Hard	5		
C6	Easy	5	200	2000
	Hard	5		
C7	Easy	7		
	Hard	7		
C8	Easy	7		
	Hard	7		

Easy refers to the ad content in which the brand name is inserted, and on the other hand, other ads do not have any worms or cookies or malicious programs. Hard refers to ad content in which the brand name is not included in the content, and on the other hand, other ads also have worms, cookies and malicious programs with them.

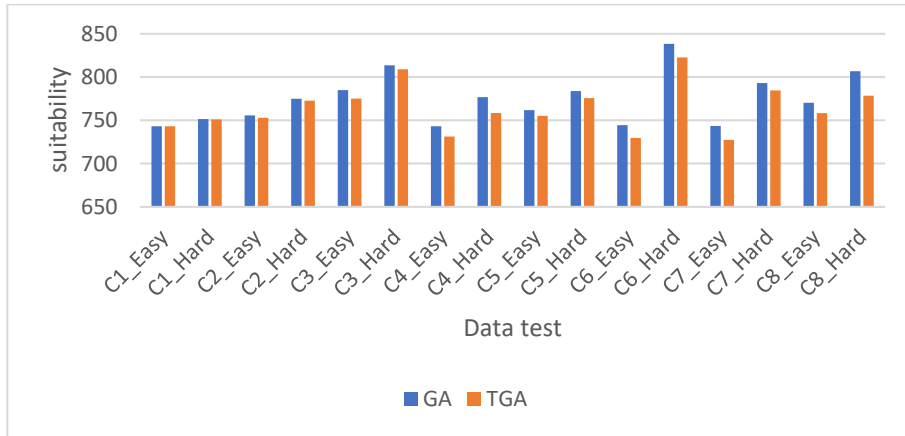
Table 17 shows the results of the implementation of the proposed algorithm (TGA) and GA algorithm. As can be seen, the proposed TGA method achieves better results in all Nest data except the Easy Level C1 test data compared to the GA algorithm. On the other hand, the results show that this strategy has led to an increase in the time required to run the algorithm and the proposed method in all test data compared to the GA algorithm requires more time to run.



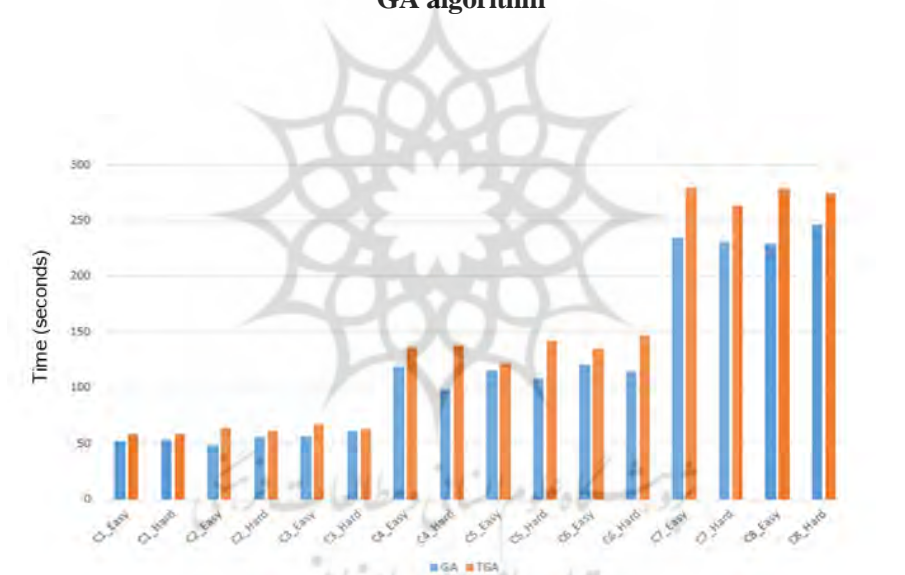
**Table 17. Specification of test data and initial settings**

Test data name	Difficulty	GA		TGA	
		The best answer	Run time	The best answer	Run time
C1	Easy	743.0468	52	743.1270	59
	Hard	751.3373	53	751.1313	59
C2	Easy	755.7383	49	752.8805	64
	Hard	774.9763	56	772.7311	61
C3	Easy	784.9694	57	775.1456	68
	Hard	813.6473	61	808.9244	63
C4	Easy	743.0768	119	731.2003	136
	Hard	776.767	98	758.3606	138
C5	Easy	761.7083	116	755.0312	122
	Hard	783.7296	108	775.6656	143
C6	Easy	744.3521	121	729.5628	135
	Hard	838.2997	115	822.696	147
C7	Easy	743.506	235	727.3001	280
	Hard	793.0137	231	784.594	264
C8	Easy	770.1929	229	758.2045	279
	Hard	806.6525	246	778.5005	274

Figure 1 shows the results of the implementation of the proposed algorithm and GA algorithm. As can be seen, the proposed method gives better answers in almost all test data compared to the GA algorithm, the extent of this improvement is more pronounced in the large test data.



**Figure 1. Results from the implementation of the proposed algorithm and GA algorithm**



**Figure 2. Time required to run the proposed algorithm and GA algorithm**

Figure 2 shows the time required to implement the proposed algorithm and GA algorithm. As can be seen, the proposed method requires more time than execution in all data compared to the GA algorithm, due to the combination of the genetic algorithm with the forbidden search algorithm. Due to the issue of cost in purchasing and sometimes irreparable effects of malicious programs, execution time is of less importance than the result. Both became graphs.

## Conclusion

In this section, first the research findings and the results obtained for each of the research hypotheses are reviewed and compared with previous research. All hypotheses are confirmed except the fourth hypothesis.

**Main Hypothesis:** Information technology has an effect on content management produced in successful economic service industries in Isfahan.

The significance level of two domains, the significance level of the test - Pearson is 0.000 and this level is less than the minimum significance level which is 0.05 and the correlation coefficient between the two variables is 0.096 and this value is the critical value. Pearson is larger with a degree of freedom of 130, which is 0.174, so it can be concluded that the main hypothesis is confirmed. Information production culture, information orientation, Data collection, summary of information, analytics, Information sensitivity, Processing, Network thinking, Optimization, Integration, Research, Methodology, save, and data transfer. Therefore, information technology with these features has an impact on content management on Instagram. The results of this hypothesis are consistent with the research of Safaei and Atef Yekta in (2009) and Soltani et al. In (2016) and Taghipour et al. (2009), Moradi and Aghaei (2016), Gosha et al. (2016). The results of this hypothesis are in line with the research of Bagherzadeh and Abdolhosseini (2019) entitled "Presenting the model of effective advertising on Instagram". The results of this study show that to measure the impact of advertising on Instagram, we can emphasize four components, including dimensions related to advertising, dimensions of psychological and biological impact, dimensions related to brand and dimensions related to media.

**Sub-hypothesis:** Information technology affects the dimensions of advertising in successful economic services in Isfahan.

The significance level of two domains, the significance level of 7 Pearson test is 0.000 and this level is smaller than the minimum significance level ( $Q = 0.05$ ) and also according to the value of 2 calculated is 0.511 and this the value is greater than Pearson's critical value with a degree of freedom of 130, which is 0.174, so it can be concluded that the first sub-hypothesis is confirmed. Explaining this finding, it can be said that information technology in general, in the dimensions of rebuilding old skills, filling vacancies, creating new skills and creating a link between users' emotions, helps bloggers to develop their skills and facilitate employment and productivity. The value of skills has increased with the

growth of technology, and advanced information technology creates advanced skills. Information technology develops the blogger skill domain. Information technology has two important tasks: creating, preparing, distributing and the like color advertisements and updating and delivering various types of advertisements within the page, as well as collecting and transmitting information on the Instagram social network from the activities of other affiliated organizations or intermediaries and even competitors. Different and in international and global activities, if ICT is designed in a precise and appropriate way and is in line with the goals and missions of the service industry; it is used as a very powerful lever for the growth and promotion of guilds. The results of this hypothesis are consistent with the research of Kia and Saadat Sirat (2016), Tajuddin et al. (2020), Foroudi et al. (2019), Safaei and Atef Kia (2009).

Test of the second sub-hypothesis: Information technology has an effect on the psychological aspects of bio in successful economic services in Isfahan.

The significance level of two domains, the significance level of Pearson r test is 0.026 and this level is smaller than the minimum significance level which is 0.05 and considering that the correlation coefficient between the two variables is 0.193 and this value is greater than Pearson's critical value with a degree of freedom of 130, which is 0.174, so it can be concluded that the second sub-hypothesis is confirmed. Explaining this finding, it can be said that information technology with its capabilities by calculating and processing information quickly and its immediate transfer, reduce work time and eliminate the need to leave home in the corona crisis and thus create peace of mind for users. Increases social networks. Information technology allows employees to quickly search and access information. The results of this hypothesis are consistent with the research of Mesbada and Kouai (2019) and Moradi and Aghaei in (2020) and Taghi Panahi et al. (2019) and Chen and Shen (2015). Also, the results of Babajidi and Ofir (2018) showed that the effect of using information and communication technology in the social network Instagram has an effect on the psychological dimensions of users. The results indicate the effect of information technology in increasing the peace of mind of the target community in the social network.

Test of the third sub-hypothesis: Information technology has an effect on brand dimensions in successful economic service industries in Isfahan.

The significance level of two domains, the significance level of Pearson r test is 0.025 and this level is smaller than the minimum

significance level which is 0.05 and considering that the correlation coefficient between the two variables is 0.05 and this value is greater than Pearson's critical value with a degree of freedom of 130, which is 0.174, and its relation is inverse, so it can be concluded that the third sub-hypothesis is accepted. Explaining this finding, it can be said that information technology increases interactions, improves the method of content production and thus advertising and attracting users, performs large-scale and tireless calculations, information sharing and increases transparency and creates a clear transparent image of the popular brand. With the help of social services. When bloggers emphasize the use of information systems, the use of advanced technologies and technological innovations, the likelihood of creating a stronger and more valuable brand in the guilds increases, this can create added value for the service guilds. It is advertised and attracted from Instagram and as a result, better activities and methods. The results of this hypothesis are the same with the research of Gordon et al. (2018) and Jung Ki et al. (2016) and Taghi Panahi et al. (2009) and Abdul Hani et al. (2009). Also, the results of research by Ebrahimpour Aziri et al. (2009) showed that information technology has a positive and significant relationship with the variables of brand value creation management and overall quality. The research results show a positive and significant effect of common value creation behavior for the customer on brand preference and brand preference on repurchase intention.

Test of the fourth sub-hypothesis: Information technology has an effect on knowledge sharing in successful economic service industries in Isfahan.

The significance level of two domains, the significance level of Pearson t-test is 0.219 and this level is greater than the minimum significance level which is 0.05, so it can be concluded that between information technology on the dimensions of Instagram media in successful service industries there is no significant economic relationship in Isfahan.

All research hypotheses were confirmed except the last one. Because explaining this finding, it can be said that information technology causes rapid access to accurate information on social networks and their ability to be used in mobile phones, reducing the level of waste and reducing the time required for purchasing and reducing the need for human resources. This method reduces the cost of activities. For this case, it is recommended not to use social networks exclusively as a store, and be sure to use face-

to-face sales in addition to using social networks and effective advertising in them, or even tours of the product production site, or create tours for loyal customers and introduce them to each other and create a campaign. It is suggested to not to use words that have been identified as ineffective and forbidden words by the forbidden search algorithm, and the social and economic conditions of the society should be considered in the digital content as much as possible.

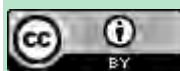
**CONFLICT OF INTEREST:** The authors declare that they have no conflicts of interest regarding the publication of this manuscript.

## References

- Abdolhosseini, M., Roshandel Arbati, T., & Aghili, S. W. (2019). "Designing the Impact of Advertising Intellectual Impact on Instagram Social Network". *Journal of Social Cultural Strategy*, 8(31), 147-171.
- Anderson-Cook, C. M. (2005). Practical genetic algorithms. In: Taylor & Francis.
- Foroudi, P., Yu, Q., Gupta, S., & Foroudi, M. M. (2019). Enhancing university brand image and reputation through customer value co-creation behaviour. *Technological Forecasting and Social Change*, 138, 218-227.
- Gordon, R., Dibb, S., Magee, C., Cooper, P., & Waitt, G. (2018). Empirically testing the concept of value-in-behavior and its relevance for social marketing. *Journal of Business Research*, 82(1), 56-67.
- Ibrahim Pourazbari, M., Akbari, M., & Kashkani Najadeh, S. S. (2020). The Impact of Customer Value Creating Behavior of Brand Preference on Re-Purchase. *Scientific Journal of Business Management Explores*, 12(24), 2-289.
- Kia, A. A., & Said Siirt, N. (2020). Activities of Iranian Virtual Social Media Users in Determination and Ethical Values of the Media (Study Six Cases on Instagram Network. *Ninth News Science Journal*, 9(33), 105-142.
- Kousha, B., Rashidi, E., & Danaei, A. (2020). Fashion of the Effect of Social Media Attraction on Social Trade: Study of Social Trade Pages Instagram. *Journal of Communication Research*, 27(1.101), 95-122.
- Moradi Dizzani, M., & Aghaei Kordashami, A. D. (2020). Investigating the Impact of Content and Social Relationships on Instagram Network on

- Customer Purchase; Explaining the Intermediary Role of Customer Intensification. *Marketing Management*, 12(46).
- Nasser Safai, N., & Atef Yekta, H. (2019). Investigating the Impact of Social Affiliate on Customer Trust in Social Networks. *New Year's Eve Marketing Research*, 4(35).
- Osatuyi, B., & Turel, O. (2018). Social motivation for the use of social technologies: an empirical examination of social commerce site users. *Internet Research*.
- Sembada, A. Y., & Koay, K. Y. (2019). How perceived behavioral control affects trust to purchase in social media stores. *Journal of Business Research*, In press.
- Shang, S., Ya-Ling, W. & Sie, Y.J. (2017). "Generating consumer resonance for purchase
- Soltani, M., Arianfar, M., Nasserzadeh, S. M. R., & Fathi, M. R. (2016). Identifying and Ranking Factors Affecting Sports Equipment through social media; Application of Logarithmic Future Planning Technique (Case Study: Social Media Users Instagram) *Contemporary Research in Sport Management*, 6(12).
- Taghi Panahi, F., Navakizi, M., & Diani, M. H. (2019). Analysis of Success of User Integration in Instagram Social Network on Content from Perspective of Image Characteristics. *Journal of Iranian Information Science and Technology Research (Irandak)*, 34(3).
- Tajuddin, U. N. R. A. Hassan, L. F. A. Othman, A. K. & Razak, N. A. (2020). Electronic Word-of-Mouth (E-WOM), Brand Image and Consumer Purchase Intention on Healthcare Products. *Journal of Accounting Research, Organization and Economics*, 4(1), 33–23.

**How to Cite:** Abdolmanafi, S., Majdameli, M., Neghabi, A., Izadi, S. (2024). The Impact of Content Produced on Instagram Social Network on Successful Economic Services of Isfahan in Corona Crisis Using a Combination of Genetic Algorithm and Forbidden Search Algorithm, *International Journal of Digital Content Management (IJDCM)*, 5(9), 236-258. DOI: 10.22054/dcm.2022.68395.1105



International Journal of Digital Content Management (IJDCM) is licensed under a Creative Commons Attribution 4.0 International License.