

A SYSTEM AND METHOD FOR MATCHING INFLUENCERS WITH AN ADVERTISEMENT CAMPAIGN

FIELD OF THE INVENTION

5 The present invention relates to a system and method for providing influencer based marketing. More particularly, this invention relates to the automatic pairing of influencers to an advertisement campaign based on their relevance to an advertisement specification and calculating the payout to the participating influencers based on their past performance.

BACKGROUND

10 Influencer marketing (also influence marketing) is a form of marketing in which focus is placed on specific key individuals rather than the target market. It identifies individuals who have influence over potential buyers, and tailors marketing activities around these influencers.

15 In one prior art, marketing allows individuals and their friends, families or existing customers to share or solicit / encourage them by giving promotional discounts or directly messaging individuals to share advertisements/product details. The other method includes a begging/buying/self-managing concept. This prior art does not involve any technology. Some use social listening tools to search for popular hashtags or trending topics to try to ride on their virality.

20 The other prior art marketing employs a social media management company to run creative campaigns, contests, and advertisements. This prior art involves little technology. Some agencies use social listening tools to search for popular hashtags or trending topics to hope to ride on their virality. Some use scheduling platforms to ensure posts go out in a timely manner on social media.

25 Another prior art uses an influencer agency or platform to ask specific people to share posts for them on their high following/outreach social media platforms, such as Instagram, Facebook, blog, etc.. In this prior art, some technology is used, such as searching tools for influencer portfolios and marketplace messaging tools.

30 Most importantly, the biggest issue that influencer agencies have been facing for many years is not the lack of sales, but unrecognized deals. Almost forty percent of sales

closed face non-fulfilment as the influencer appointed by the advertiser could 'reject' endorsing the advertiser if he or she 'doesn't want, or doesn't like it'.

In the above prior arts, the publishers, such as Facebook, newspapers, and so on, are used as advertisement mediums. Further, the influencers are brought/hired/identified based on the popularity of their names/ brand names, which leads to non-fulfilment because of reliance on individual names. Further, the prior arts are reliant on word of mouth / influencer marketing and are accessible only by certain consumer advertisers, either small or large companies.

A need therefore exists for an improved system and method for matching influencers to an advertisement specification based on the relevance of the influencer that overcomes the above drawbacks.

SUMMARY OF THE INVENTION

A primary embodiment of the invention is a system for pairing influencers based on an advertising specification to an advertisement campaign comprising a database configured to store influencer data entries, each influencer data entry comprising influencer psychographics including a unique post identification number associated with a post and at least one tag from a list comprising a visual recognition tag, concept tag and caption text associated with the unique post identification number; advertisement campaign data entries, each advertisement campaign data entry comprising search criteria, the search criteria each comprising keywords specified by the advertiser; and a processor configured to match the tags and caption text to search criteria keywords and generate a relevancy score for each unique post identification number; obtain a shortlist of influencers with at least one unique post identification number with a relevancy score of >0 , wherein each influencer is associated with a total relevancy score.

In an optional design of the primary embodiment, the stop words are removed from the caption text before being matched to search criteria keywords. Optionally, the relevancy score is calculated using the formula:

Relevancy score = $(0.5 * \text{number of matches} / \text{word count after removal of stop words}) + 0.5$.

Optionally, the total relevancy score is the sum of all relevancy scores associated with a given influencer. Optionally, the total relevancy scores are normalised to a value between 1 and 10. Optionally, the search criteria keywords are classified as either positive or negative,

and wherein the processor is further configured to exclude influencers from the shortlist with at least one unique post identification number where at least one associated tag matches at least one negative search criteria keyword. Optionally, each influencer data entry further comprises audience demographics and each advertisement campaign entry further comprises target audience demographics and, wherein the processor is further configured to exclude an influencer from the shortlist whose audience demographics does not match the target audience demographics. Optionally, the at least one visual recognition tag associated with a unique post identification number is obtained by parsing the video/images associated with the unique post identification number using a visual recognition service. Optionally, the visual recognition service is selected from a group comprising Clarifai, Cloud Vision and Amazon Rekognition. Optionally, the at least one concept tag associated with a unique post identification number is obtained by parsing the text caption associated with the unique post identification number using a natural language understanding service. Optionally, the natural language understanding service is selected from a group comprising marketed under the trademarks comprising Watson's Conversation Service, Microsoft's Language Understanding Intelligence Service, Google Natural Language, Wit.ai and Api.ai. Optionally, each influencer data entry further comprises the average past rating, the total follower count, the total number of posts and the total number of likes and comments, and wherein the processor is further configured to calculate the payout to influencers on the shortlist, and wherein the payout is based on the total number of interactions across all posts relative to the influencer's follower count and modified based on the average past rating, the total relevancy score and the nature of the work performed by the influencer.

An alternative of the primary embodiment of the invention is a computer-implemented method of pairing an advertiser with at least one influencer for an advertisement campaign, the method comprising the steps of obtaining available influencer account data comprising information on influencer posts, the influencer posts comprising images/videos and associated text captions; parsing the images/videos using a visual recognition service to obtain visual recognition tags and parsing the text captions to a natural language understanding service to obtain concept tags; matching the text captions to positive search criteria keywords and generating a relevancy score for each influencer post with at least one match, wherein stopwords are removed from the text captions prior to matching with the positive search criteria; matching the visual recognition tags to the positive search criteria keywords and generating a relevancy score for each influencer post that matches the criteria but had not already received a relevancy score of >0 ; matching the concept tags to the positive search criteria keywords and generating a relevancy score for each influencer post that matches the criteria but had not already received a relevancy score of >0 ; obtaining a

shortlist of influencers with at least one unique post identification number with a relevancy score of >0 , wherein each influencer is associated with a total relevancy score.

In an optional design of the alternative of the primary embodiment, the matching of search criteria can be done solely with caption text. Optionally, the step of matching the visual recognition tags to the search criteria keywords and generating a relevancy score for each influencer post is an additional second step performed sequentially after the matching of only the caption text has occurred wherein only posts that have yet to receive a relevancy score can be matched. Optionally, the step of matching the concept to the search criteria keywords and generating a relevancy score for each influencer post is an additional third step performed sequentially after the matching of only the visual recognition tags has occurred wherein only posts which have yet to receive a relevancy score can be matched.

Optionally, the total relevancy score is the sum of all relevancy scores for a given influencer. Optionally, the relevancy score is calculated using the formula: Relevancy score = $(0.5 * \text{number of matches} / \text{total word count after removing stopwords}) + 0.5$. Optionally, the total relevancy scores are normalised to a value between 1 and 10. Optionally, influencers who match the negative search criteria keywords are excluded from the shortlist. Optionally, influencers with audience demographics that do not match the target audience demographics are excluded from the shortlist. Optionally, the visual recognition service is selected from a group of services marketed under the trademarks comprising Clarifai, Cloud Vision and Amazon Rekognition. Optionally, the natural language understanding service is selected from a group of services marketed under the trademarks comprising Watson's Conversation Service, Microsoft's Language Understanding Intelligence Service, Google Natural Language, Wit.ai and Api.ai. Optionally, the alternative of the primary embodiment of the invention comprises the further step of calculating a payout to influencers on the shortlist, wherein the payout is based on the total number of interactions across all posts relative to the influencer's follower count and modified based on the average past rating, the total relevancy score and the nature of the work performed by the influencer.

The details of one or more embodiments are set forth in the accompanying drawings and the description below. Other features, objects, and advantages of the invention will be apparent from the description and drawings, and from the claims.

BRIEF DESCRIPTION OF THE DRAWINGS

The summary above, as well as the following detailed description of illustrative embodiments, is better understood when read in conjunction with the appended

drawings. For the purpose of illustrating the present disclosure, exemplary constructions of the disclosure are shown in the drawings. However, the disclosure is not limited to specific methods and instrumentalities disclosed herein. Moreover, those in the art will understand that the drawings are not to scale. Wherever possible, like elements have been indicated by identical numbers.

FIG. 1 is a simple block diagram of a system for providing influencer based marketing in accordance with the present invention; and

FIG. 2 is a flow diagram pertaining to a process of providing influencer based marketing in accordance with the present invention.

FIG. 3 is a block diagram high level overview of the system for the profiling, pricing and pairing unit.

FIG. 4 illustrates a method **400** for obtaining a shortlist of influencers with psychographics which are relevant to an advertisement specification.

DETAILED DESCRIPTION OF THE INVENTION

The particular values and configurations discussed in these non-limiting examples can be varied and are cited merely to illustrate at least one embodiment and not intended to limit the scope thereof.

FIG. 1 is a simple block diagram of a system **100** for providing influencer based marketing in accordance with the present invention. The system **100** has a profiling, pricing and pairing unit **104**. The advertisers **102** who want to set up campaign for marketing their products/services are connected to the system **100**, either with or without registering in the system or can use social network logins to enter the system **100**. Influencers **104** can also join the system **100** by registering using the social networks such as Instagram. Influencers are individuals who have one or more connections with their friends, families, colleagues, and the like, and are connected to one or more social networks. The profiling, pricing and pairing unit **104** allows pairing of influencers to advertisers based on profile relevance, so that the influencers can perform the Campaign Work and get paid for their work.

FIG. 2 is a flow diagram **200** pertaining to a process of providing influencer based marketing in accordance with the present invention. As at block **202**, advertisers are allowed to provide Goal Preference for Campaign Work by selecting budget,

objective and influencers actions to be performed. The influencers join the system **100** and connect to social networks, such as Instagram, for performing Campaign Work on social networks and the like. Advertisers **102** also provide influencer preferences for the Campaign Work by selecting the preferred demographics and psychographics and questions to be given to influencers for preferred influencer selection for the Campaign Work, as at block **208**. In case of the need for any clarification, the advertisers **102**, can contact the support system, as at block **204**. The support system can be like a customer care service of the system **100** and the like. Once the advertisers' preferences are submitted, the profiling, pricing and pairing unit **104** sends invitations regarding the Campaign Work to the influencers based on preference criteria.

As at block **214**, the profiling, pricing and pairing unit **104** checks whether the influencer's profile matches the Goal Preference of advertisers. The checking is performed based on demographics and psychographics of influencers and influencers' answers to the questions by advertisers. As at block **216** and **218**, if an influencer gives correct answers to the questions and qualifies, the advertisers are paired with that particular influencer. As at block **222**, if the influencers do not qualify in the questions, they are not allowed to join the campaign. Thus, the profiling, pricing and pairing unit **104** performs automatic pairing of influencers and advertisers for a Campaign Work, as at step **218**. Once influencers and advertisers are paired, the profiling, pricing and pairing unit **104** checks and send details of brief and exact payout amounts of advertisers to the influencers for the Campaign Work. As at block **220**, influencers can accept or reject Campaign Work based on the payout amount. If the influencer accepts the Campaign Work, the profiling, pricing and pairing unit **104** allows the influencer to work on campaign required action.

As at block **210**, the works of influencers are monitored and verified by the advertisers. For example, monitoring the campaign made via posts by the influencers on social networks and the like, and verifying the same before posting. As at block **226**, the influencers are allowed to make changes in the work and resubmit the same, if required, and the advertisers can verify the same again. The advertisers are allowed to report on the work of influencers, for example they can report it as successful (push live), abuse or rescheduled. The abused or incomplete works can be sent to the influencer to make necessary changes. As at block **212**, the advertisers are also allowed to rate the influencers to unveil influencers' post results, such as likes, comments and the like, on the influencers' post/work. The ratings of each influencer are stored and can be used to continuously manage ecosystem and pricing. As at block **224**, influencers are paid for their work (push

live or rescheduled) once ratings are done by advertisers, until works (post) are not removed or altered by influencers or until the time limit set by the advertisers.

FIG. 3 depicts a block diagram of the system for the profiling, pricing and pairing unit **300**. The system **300** includes a database **301** configured to store influencer data entries **302**, advertisement data entries **303**.

Each influencer data entry **302** contains relevant information relating to an influencer including demographics, psychographics, and audience demographics. Influencer demographics include age, race, religion, gender, family size, ethnicity, income, and education which can be obtained from an influencer and communicated to the database **301** by way of a web service via the transmitting and receiving unit **306**. The influencer data entry **302** may also contain the total follower count, the total number of posts, the total number of likes and comments made by the influencer on a given social media platform and influencer psychographics which may be obtained via a publically available remote application program interface (API) and communicated to the database **301** the transmitting and receiving unit **306**. Influencer psychographics are not directly obtained in manner but rather the raw content which are used to ultimately derive influencer psychographics. Each influencer data entry **302** may also contain an influencer rating. The influencer rating is derived from the ratings given to an influencer based on their performance during previous advertisement campaigns and may represent the influencer's average rating over a predetermined duration or the average rating based on all campaigns the influencer has participated in.

Influencer psychographics comprises at least one keyword. The keywords are also known as tags and are derived from content present in posts made by the influencer. Such content includes images and videos along with accompanying text. It will be readily understood that any form of textual, aural and visual content may be used to derive a tag. The video and images can be parsed using a visual recognition service while text captions may be parsed using a natural language understanding to yield a visual recognition tag and concept tag respectively. A concept tag may also reflect either a negative, positive or neutral sentiment. Such tags are associated to the influencer's post by way of a unique post identification number assigned to the post. Video content can be parsed using a speech recognition service. Raw textual, aural and visual content can be modified either prior or after parsing by one of the aforementioned services. The influencer data entry **302** may contain a list of stop words. Stop words refer to words which are filtered out from text such as text captions and text derived from a speech recognition service prior or after further processing. A non-limiting example of a list of stop words is as follows:

a, about, above, after, again, against, all, am, an, and, any, are, aren't, as, at, be, because, been, before, being, below, between, both, but, by, can't, cannot, could, couldn't, did, didn't, do, does, doesn't, doing, don't, down, during, each, few, for, from, further, had, hadn't, has, hasn't, have, haven't, having, he, he'd, he'll, he's, her, here, here's, hers, herself, him, himself, his, how, how's, I, I'd, I'll, I'm, I've, if, in, into, is, isn't, it, it's, its, itself, let's, me, more, most, mustn't, my, myself, no, nor, not, of, off, on, once, only, or, other, ought, our, ours, ourselves, out, over, own, same, shan't, she, she'd, she'll, she's, should, shouldn't, so, some, such, than, that, that's, the, their, theirs, them, themselves, then, there, there's, these, they, they'd, they'll, they're, they've, this, those, through, to, too, under, until, up, very, was, wasn't, we, we'd, we'll, we're, we've, were, weren't, what, what's, when, when's, where, where's, which, while, who, who's, whom, why, why's, with, won't, would, wouldn't, you, you'd, you'll, you're, you've, your, yours, yourself and yourselves.

The visual recognition service may be selected from a group comprising Clarifai, Cloud Vision and Amazon Rekognition but may also include proprietary visual recognition services. It is envisaged that any visual recognition service that is capable of returning tags will be suitable.

The natural language understanding service may selected from a group comprising marketed under the trademarks comprising Watson's Conversation Service, Microsoft's Language Understanding Intelligence Service, Google Natural Language, Wit.ai and Api.ai but may also include proprietary natural language understanding services. It is envisaged that any natural language understanding service that is capable of returning tags will be suitable.

The database **301** may also be configured to store advertisement campaign data entries **303**.

Each advertisement campaign data entry **303** contains information relating to an advertisement specification and includes a budget, a questionnaire for a prospective influencer, the nature of the work to be performed and a search criteria which specifics both a positive and negative search criteria keywords in relation audience demographics, and influencer psychographics. The budget represents the maximum amount to be spent during an advertisement campaign. The total payout to influencers allocated to the advertisement campaign should not exceed the budget. Audience demographics can include any of the following: age, race, religion, gender, family size, ethnicity, income, and education while influencer psychographics includes tags. The questionnaire may be in the form of questions with a predetermined response such as a binary response in the form of yes or no, true or false or may be in the form of multiple choice questions. The nature of the work to be

performed includes the time spent on the work to be performed, the action to be performed by the influencer and the value of the product or service if applicable involved. Examples of the time spent on the work are < 1hr with little effort, <1hr, >1hr, >1hr with more effort. The action to be performed includes receiving or collecting something, visiting a place with either
 5 minimal interaction or an in-depth experience.

The system **300** includes a processor **304** configured to match the tags and caption text to search criteria keywords and based on the number of keyword matches for each post, generate a relevancy score and associate it with the unique post identification number. A match is made if a search criteria keyword exactly matches a tag/caption text. It should be
 10 apparent to a skilled person in the art that a match may also be made if a partial match is obtained.

The matching of search criteria can be done solely with caption text. Optionally, the step of matching the visual recognition tags to the search criteria keywords and generating a relevancy score for each influencer post is an additional second step performed sequentially
 15 after the matching of only the caption text has occurred. Only posts which have yet to receive a relevancy score can be matched during this second pass. Optionally, the step of matching the concept to the search criteria keywords and generating a relevancy score for each influencer post is an additional third step performed sequentially after the matching of only the visual recognition tags has occurred. Only posts which have yet to receive a
 20 relevancy score can be matched during this third pass.

A shortlist of influencers with at least one unique post identification number with a relevancy score of >0, where each influencer is associated with a total relevancy score is generated. The total relevancy score is the sum of all relevancy scores for a given influencer.

A relevancy score is calculated using the formula:

25 Relevancy score = $(0.5 * \text{number of matches} / \text{word count after removal of stop words}) + 0.5$

Since a relevancy score is generated for a single post, in the instance where there are more than one post for a given influencer that match the search criteria, the relevancy scores generated for each post are summed up to yield a total relevancy score for that influencer. The total relevancy scores for each influencer in the shortlist may be normalised. This is
 30 especially useful in the event that the total relevancy score is used as a modifier when determining an influencer's payout. A non-limiting example of a method for normalising the total relevancy scores between the values of 1 to 10 is as follows:

Let 1 be the new minimum (newMin) and 10 to be new maximum (newMax). The smallest total relevancy score (oldMin) for an influencer on the shortlist is assigned a normalised total relevancy score of 1 while the highest total relevancy score (oldMax) is assigned a normalised total relevancy score of 10. The remaining total relevancy scores in the shortlist will be assigned a normalised total relevancy score (newX) using the formula:

$$\text{newX} = \text{newMin} + (\text{oldX} - \text{oldMin}) * (\text{newMax} - \text{newMin}) / (\text{oldMax} - \text{oldMin})$$

The processor **304** can be further configured to calculate a payout for each influencer list in the shortlist and to send to the influencer in the form of message, the expected payout, the questionnaire and a brief description of the nature of the work to be performed can be sent by way of the transmitting and receiving unit **306**.

The payout is determined by follower count where the higher the following the higher the payout, the engagement rate where the better the influencer engages with their audience, the higher the payout, the nature of the work to be performed where the higher the effort and time spent required the better the payout and the normalised total relevancy scores, where the more relevant the influencer, the higher the payout.

A non-limiting example of how a payout can be calculated is as follows:

$$\text{Engagement Rate} = \text{total interactions made} / (\text{follower count} * \text{total posts})$$

The total interactions made refers to the total interactions made by users across all posts made by the influencer and include likes and comments made by followers and other users of the social media platform that have yet to follow the influencer.

For example, where the follower size is 1000, the number of posts is 100 and the number of user interactions is 5000, the Engagement rate is $5000 / (1000 * 100) = 5\%$.

$$\text{Payout} = \text{Follower size} * \text{engagement rate} * \text{effort multiplier} * \text{Relevance multiplier} * \text{Rating multiplier}$$

The effort multiplier may be a value anywhere between 0.16-0.35, the relevance multiplier may a value anywhere between 1.0 and 1.1 and the rating multiplier may be a value anywhere between 0.8 and 1.1.

Messages sent to shortlisted influencers are sent in order of the influencer with the highest normalised total influencer score or total influencer score to the influencer with the lowest score. Messages will be sent as long as the budget is not met. Other factors such as influencer follower count are not taken into account in deciding priority. An influencer who

receives a message will be required to answer the questions correctly before being allowed to join the advertisement campaign.

The server may include memory **305** configured to store data suitable for performing the required functions as disclosed herein. For examples the memory **305** may store algorithms
5 and/or functions suitable for obtaining a shortlist of influencers along with their respective total relevancy scores.

CLAIMS

1. A system for pairing influencers based on an advertising specification to an advertisement campaign comprising:

a database configured to store:

influencer data entries, each influencer data entry comprising influencer psychographics including a unique post identification number associated with a post and at least one tag from a list comprising a visual recognition tag, concept tag and caption text associated with the unique post identification number;

advertisement campaign data entries, each advertisement campaign data entry comprising search criteria, the search criteria each comprising keywords specified by the advertiser; and

a processor configured to:

match the tags and caption text to search criteria keywords and generate a relevancy score for each unique post identification number;

obtain a shortlist of influencers with at least one unique post identification number with a relevancy score of >0 , wherein each influencer is associated with a total relevancy score which is the sum of all relevancy scores associated with a given influencer.

2. The system according to claim 1, wherein stop words are removed from the caption text before being matched to search criteria keywords.

3. The system according to claim 1, wherein the total relevancy scores are normalised to a value between 1 and 10.

4. The system according to claim 1, wherein the search criteria keywords are classified as either positive or negative, and wherein the processor is further configured to exclude influencers from the shortlist with at least one unique post identification number where at least one associated tag matches at least one negative search criteria keyword.

5. The system according to claim 1, wherein each influencer data entry further comprises audience demographics and each advertisement campaign entry further comprises target audience demographics and, wherein the processor is further configured to exclude an influencer from the shortlist whose audience demographics does not match the target audience demographics.

6. The system according to claim 1, wherein the at least one visual recognition tag associated with a unique post identification number is obtained by parsing the video/images associated with the unique post identification number using a visual recognition service.

7. The system according to claim 1, wherein the at least one concept tag associated with a unique post identification number is obtained by parsing the text caption associated with the unique post identification number using a natural language understanding service.

8. The system according to claim 1, wherein each influencer data entry further comprises the average past rating, the total follower count, the total number of posts and the total number of likes and comments, and wherein the processor is further configured to calculate the payout to influencers on the shortlist, and wherein the payout is based on the total number of interactions across all posts relative to the influencer's follower count and modified based on the average past rating, the total relevancy score and the nature of the work performed by the influencer and wherein the rating is a value between 1 and 5 where the higher the value, the better the performance.

9. The system according to claim 1, wherein the processor is further configured to send a message to shortlisted influencers in order of the influencer with the highest total relevancy score to lowest total relevancy score.

10. A computer-implemented method of pairing an advertiser with at least one influencer for an advertisement campaign, the method comprising the steps of:

obtaining available influencer account data comprising information on influencer posts, the influencer posts comprising images/videos and associated text captions;

parsing the images/videos using a visual recognition service to obtain visual recognition tags and parsing the text captions using a natural language understanding service to obtain concept tags;

matching the text captions to positive search criteria keywords associated with the advertisement campaign and generating a relevancy score for each influencer post with at least one match, wherein stopwords are removed from the text captions prior to matching with the positive search criteria;

matching the visual recognition tags to the positive search criteria keywords associated with the advertisement campaign and generating a relevancy score for each influencer post that matches the criteria but had not already received a relevancy score of >0 ;

matching the concept tags to the positive search criteria keywords associated with the advertisement campaign and generating a relevancy score for each influencer post that matches the criteria but had not already received a relevancy score of >0 ;

summing up the relevancy scores associated with an influencer to obtain a total relevancy score which is the sum of all relevancy scores associated with a given influencer;

obtaining a shortlist of influencers with at least one unique post identification number with a relevancy score of >0 , wherein each influencer is associated with the total relevancy score.

11. The computer-implemented method according to claim 10, wherein the total relevancy scores are normalised to a value between 1 and 10.

12. The computer-implemented method according to claim 10, wherein influencers who match the negative search criteria keywords are excluded from the shortlist.

13. The computer-implemented method according to claim 10, wherein influencers with audience demographics that do not match the target audience demographics are excluded from the shortlist.

14. The computer-implemented method according to claim 10, comprising the further step of:

calculating a payout to influencers on the shortlist, wherein the payout is based on the total number of interactions across all posts relative to the influencer's follower count and modified based on the average past rating, the total relevancy score and the nature of the work performed by the influencer.

15. The computer-implemented method according to claim 10, comprising the further step of:

sending a message to shortlisted influencers in order of the influencer with the highest total relevancy score to lowest total relevancy score..