

METHOD AND SYSTEM FOR DETERMINING BRAND EQUITY OF A BRAND

TECHNICAL FIELD

5 [001] This disclosure relates generally to determining brand equity, and more particularly to system and method for determining brand equity of a brand associated with one or more products.

BACKGROUND

10 [001] Market research is an activity of collating information about a brand from varied sources and then processing the collated data to determine customers' needs and preferences. As a part of market research, brand equity is determined, which involves determining a commercial value of a product associated with a brand. A brand equity of a product of a brand is the consumer's individual and intangible assessment of the brand and its products.

15 [002] Typically, determination of brand equity entails taking a holistic view of customer perception of a brand and its products, developed based on various marketing campaigns. The brand equity may be broadly classified under brand recall, brand awareness, and customer's emotional loyalty. Further, the brand equity of a company can be, inter alia, positive, negative, neutral for one or more equity drivers determined for the product. Typically, having a positive brand equity has a positive correlation with brand sales. Similarly, a negative brand equity usually
20 precludes drop in sales.

[003] Conventionally, performing brand equity measurement is time consuming, expensive, and covers only a tiny percentage of the customer base. One way to obviate this problem is to perform collating responses of customers from social media platform. However, such collation, and tools therefor, do not provide deep insights that have an embedded domain expertise
25 that is required for each market segment, such as pharmaceuticals, consumer goods, banking, and the like. Further, the determination of equity drivers in conventional methods relies heavily on category domain experts and pre-defined industry accepted categories around equity drivers. Additionally, the results of conventional methods for brand equity measurement may be skewed

because of an element of bias that may be inherent in the way survey is designed for conducting the exercise.

[004] Therefore, there is a need to a method of measuring brand equity that gathers opinion of a large customer base, and does not involve any leading questions, while at the same time being cost effective and resource optimal.

SUMMARY

[005] In one embodiment, a method of determining brand equity of a brand associated with one or more products, is disclosed. In one example, the method comprises accumulating, by a brand equity determination engine, a corpus of data from a plurality of digital platforms. The corpus of data relates to a category of the one or more products whose brand equity is to be determined. The method further comprises pre-processing, by the brand equity determination engine, the corpus of data to covert the corpus of data into a structured dataset. The method further comprises determining, by the brand equity determination engine, based on part-of-speech (POS) tagging performed on the structured dataset, one or more design attributes indicative of subject and objects present in one or more sentences constituting the structured dataset. The method further comprises identifying, by the brand equity determination engine, for each product from the one or more products, a set of design drivers from the one or more design attributes, based on at least a relevance of a design driver to each product from the one or more products. The method further comprises scaling, by the brand equity determination engine, each of the design drivers from the set of design drivers, on pre-defined scales of equity association. The method further comprises classifying, by the brand equity determination engine, each of the equity associations into a plurality of buckets, based on a frequency of occurrence of the equity associations. The method further comprises correlating, by the brand equity determination engine, the classified buckets of equity associations with concepts defined in a knowledge graph, to determine a tone associated with each design driver from the set of design drivers, for each of the products. The method further comprises determining, by the brand equity determination engine, a brand equity for each product from the one or more products, based on the determined tone.

[006] In another embodiment, a system for determining brand equity of a brand associated with one or more products, is disclosed. The system comprises a processor and a memory communicatively coupled to the processor. The memory stores processor-executable instructions, which, on execution, cause the processor to accumulate a corpus of data from a plurality of digital platforms. The corpus of data relates to a category of the one or more products whose brand equity is to be determined. The processor-executable instructions, upon execution, further cause the processor to pre-process the corpus of data to covert the corpus of data into a structured dataset. The processor-executable instructions, upon execution, further cause the processor to determine based on part-of-speech (POS) tagging performed on the structured dataset, one or more design attributes indicative of subject and objects present in one or more sentences constituting the structured dataset. The processor-executable instructions, upon execution, further cause the processor to identify, for each product from the one or more products, a set of design drivers from the one or more design attributes, based on at least a relevance of a design driver to a product from the one or more products. The processor-executable instructions, upon execution, further cause the processor to scale each of the design drivers from the set of design drivers on pre-defined scales of equity association. The processor-executable instructions, upon execution, further cause the processor to classify, for each of the products, each of the equity associations into a plurality of buckets, based on a frequency of occurrence of the equity associations in the structured dataset. The processor-executable instructions, upon execution, further cause the processor to correlate the classified buckets of equity associations with concepts defined in a knowledge graph, to determine a tone associated with each design driver from the set of design drivers, for each of the products. The processor-executable instructions, upon execution, further cause the processor to determine a brand equity for each product from the one or more products, based on the determined tone.

[007] It is to be understood that both the foregoing general description and the following detailed description are exemplary and explanatory only and are not restrictive of the invention, as claimed.

BRIEF DESCRIPTION OF THE DRAWINGS

[008] The accompanying drawings, which are incorporated in and constitute a part of this disclosure, illustrate exemplary embodiments and, together with the description, serve to explain the disclosed principles.

5 [009] FIG. 1 is a block diagram of an exemplary network environment for determining brand equity of a brand associated with one or more products, in accordance with some embodiments of the present disclosure.

[010] FIG. 2 is a block diagram of exemplary system for determining brand equity of a brand associated with one or more products, in accordance with some embodiments of the present disclosure.

10 [011] FIGs. 3A and 3B collectively depict a block diagram of exemplary process for determining brand equity of a brand associated with one or more products, in accordance with some embodiments of the present disclosure.

[012] FIG. 4 is a block diagram of exemplary process for pre-processing a corpus of data to covert the corpus of data into a structured dataset, for determining brand equity of a brand
15 associated with one or more products, in accordance with some embodiments of the present disclosure.

DETAILED DESCRIPTION

[013] Exemplary embodiments are described with reference to the accompanying
20 drawings. Wherever convenient, the same reference numbers are used throughout the drawings to refer to the same or like parts. While examples and features of disclosed principles are described herein, modifications, adaptations, and other implementations are possible without departing from the spirit and scope of the disclosed embodiments. It is intended that the following detailed description be considered as exemplary only, with the true scope and spirit being indicated by the
25 following claims.

[014] Various implementations may be found in a method and/or a system for determining brand equity of a brand associated with one or more products. The system comprises accumulating a corpus of data from a plurality of digital platforms, wherein the corpus of data relates to a category of the one or more products whose brand equity is to be determined. The

plurality of digital platforms comprise one or more of: social media platforms, e-commerce websites, forums, blogs.

5 [015] The system further comprises pre-processing the corpus of data to covert the corpus of data into a structured dataset. In an embodiment, the pre-processing comprises performing spam filtering on the corpus of data to remove spam. The pre-processing further comprises filtering the context from the residual corpus of data to remove the irrelevant context from the residual corpus of data. The pre-processing further comprises performing sentence tokenization and/or word tokenization, of the corpus data on which context filtering has been performed, to generate corpus of data split into sentences. The pre-processing further comprises removing special characters from 10 the individual sentences constituting the generated corpus of data, to covert the corpus of data into the structured dataset. The special characters comprise one or more of: punctuations, emoticons, Unicode characters. In an embodiment, the system further comprises clustering the one or more sentences into a plurality of coherent clusters based on semantic and contextual similarity, which in simpler terms involves sentences having same meaning or talking about the same thing.

15 [016] The system further comprises determining based on part-of-speech (POS) tagging performed on the structured dataset, one or more design attributes indicative of subject and objects present in one or more sentences constituting the structured dataset. The system further comprises performing at least a pronoun resolution, subsequent to the POS tagging, by resolving one or more pronouns present in the structured dataset by resolving co-references of all anaphores and 20 cataphores.

[017] The system further comprises identifying for each product from the one or more products, a set of design drivers from the one or more design attributes, based on at least a relevance of a design driver to each product from the one or more products.

25 [018] The system further comprises scaling each of the design drivers from the set of design drivers, on pre-defined scales of equity association. In an embodiment, the pre-defined scales are used for assessing one or more of: a sentiment polarity and a sentiment intensity, each of which is associated with a design driver of a product from the one or more products. The pre-defined scale for assessing the sentiment polarity may comprise: a positive category, a negative category, and a neutral category. The pre-defined scale for assessing the sentiment intensity may

comprise: a good category, a better category, and a best category. The pre-defined scale comprises a continuous range of values for indicating strength of the sentiment polarity.

[019] The system further comprises classifying each of the equity associations into a plurality of buckets, based on a frequency of occurrence of the equity associations. The system
5 further comprises correlating the classified buckets of equity associations with concepts defined in a knowledge graph, to determine a tone associated with each design driver from the set of design drivers, for each of the products. The system further comprises determining a brand equity for each product from the one or more products, based on the determined tone.

[020] Referring now to FIG. 1, an exemplary network environment 100 for determining
10 brand equity of a brand associated with one or more products, is illustrated in accordance with some embodiments of the present disclosure. The network environment 100 displays a brand equity determination engine 102. The network environment 100 further displays a plurality of products categories 104 belonging to various categories, comprising pharmaceutical products 104₁, financial products 104₂, ..., consumable products 104. The network environment 100 further
15 displays a plurality of digital platforms 106 comprising an e-commerce platform 106₁, a social media platform 106₂, ..., blogs 106_n.

[021] In an implementation, the network environment 100 may further comprise a knowledge database 108 that stores a customized and a curated knowledge graph. Each of the network element of the network environment 100, such as the brand equity determination engine
20 102, the plurality of products categories 104, the plurality of digital platforms 106, the knowledge database 108 may be communicatively coupled via the communication network 110.

[022] The network environment 100 may include a database, such as the travel knowledge database 108. In an implementation, the knowledge database 118 may be configured to store the customized knowledge graph which builds category/domain specific insights and learns the
25 “language-speak” of the category of the plurality of products categories 104. The knowledge graph may comprise ontology structure that may be created base on implementation of artificial intelligence and language, personal processing techniques, such as Natural Language Processing (NLP) techniques over a corpus of data.

[023] The communication network 110 may include a medium through which the brand equity determination engine 102, the plurality of products categories 104, the plurality of digital platforms 106, and the knowledge database 108 may communicate with each other. Examples of the communication network 114 may include, but are not limited to, the Internet, a cloud network, a Wireless Fidelity (Wi-Fi) network, a Wireless Local Area Network (WLAN), a Local Area Network (LAN), a telephone line (POTS), Long Term Evolution (LTE), and/or a Metropolitan Area Network (MAN). Various devices in the exemplary network environment 100 may be configured to connect to the communication network 110, in accordance with various wired and wireless communication protocols. Examples of such wired and wireless communication protocols may include, but are not limited to, Transmission Control Protocol and Internet Protocol (TCP/IP), User Datagram Protocol (UDP), Hypertext Transfer Protocol (HTTP), File Transfer Protocol (FTP), Zigbee, EDGE, infrared (IR), IEEE 802.11, 802.16, cellular communication protocols, and/or Bluetooth (BT) communication protocols.

[024] In operation, the brand equity determination engine 102 may accumulate a corpus of data from a plurality of digital platforms 106. The corpus of data relates to a category of the products 104₁ – 104_n, from the plurality of products 104, whose brand equity is to be determined.

[025] In an embodiment, the brand equity determination engine 102 may pre-process accumulated the corpus of data to covert the corpus of data into a structured dataset. In an embodiment, the pre-processing by the brand equity determination engine 102 comprises performing spam filtering on the corpus of data to remove spam. The pre-processing further comprises filtering the context from the residual corpus of data to remove the irrelevant context from the residual corpus of data. The pre-processing further comprises performing sentence tokenization and/or word tokenization, of the corpus data on which context filtering has been performed, to generate corpus of data split into sentences. The pre-processing further comprises removing special characters from the individual sentences constituting the generated corpus of data, to covert the corpus of data into the structured dataset. The special characters comprise one or more of: punctuations, emoticons, Unicode characters. In an embodiment, the brand equity determination engine 102 further clusters the one or more sentences into a plurality of coherent clusters based on semantic and contextual similarity, which in simpler terms involves sentences having same meaning or talking about the same thing.

[026] The brand equity determination engine 102 further determines one or more design attributes indicative of subject and objects present in one or more sentences constituting the structured dataset, based on part-of-speech (POS) tagging performed on the structured dataset. The brand equity determination engine 102 further performs at least a pronoun resolution, subsequent to the POS tagging, by resolving one or more pronouns present in the structured dataset by resolving co-references of all anaphores and cataphores. The brand equity determination engine 102 further identifies for each product (such as a financial product 104₂ from the plurality of products categories 104), a set of design drivers from the one or more design attributes. The design drivers may be determined based on at least a relevance of a design driver to each product from the one or more products.

[027] The brand equity determination engine 102 further scales each of the determined design drivers from the set of design drivers, on pre-defined scales of equity association. In an embodiment, the pre-defined scales are used for assessing one or more of: a sentiment polarity and a sentiment intensity, each of which is associated with a design driver of a product from the one or more products. The pre-defined scale for assessing the sentiment polarity may comprise: a positive category, a negative category, and a neutral category. The pre-defined scale for assessing the sentiment intensity may comprise: a good category, a better category, and a best category. The pre-defined scale comprises a continuous range of values for indicating strength of the sentiment polarity.

[028] The brand equity determination engine 102 further classifies each of the equity associations into a plurality of buckets, based on a frequency of occurrence of the equity associations. The brand equity determination engine 102 further correlates the classified buckets of equity associations with concepts defined in a knowledge graph stored in the knowledge database 108, which may be retrieved via the communication network 110. The brand equity determination engine 102 may further determine a tone associated with each design driver from the set of design drivers, for a product from the plurality products categories 104 (such as financial products 104₂). The brand equity determination engine 102 further determines a brand equity for the product, based on the determined tone.

[029] As will be appreciated by one skilled in the art, a variety of processes may be employed for transmitting data over a communication network 110. For example, the exemplary

network environment 100 may transmit data over a communication network by the processes discussed herein. In particular, as will be appreciated by those of ordinary skill in the art, control logic and/or automated routines for performing the techniques and steps described herein may be implemented by the network environment 100, either by hardware, software, or combinations of hardware and software. For example, suitable code may be accessed and executed by the one or more processors on the network environment 100 to perform some or all of the techniques described herein. Similarly, application specific integrated circuits (ASICs) configured to perform some or all of the processes described herein may be included in the one or more processors on the network environment 100.

[030] FIG. 2 is a block diagram of exemplary system for determining brand equity of a brand associated with one or more products, in accordance with some embodiments of the present disclosure. FIG. 2 is explained in conjunction with elements from FIG. 1. With reference to FIG. 2, there is shown the brand equity determination engine 102 that may include one or more processors, such as a processor 202, a memory 204, a pre-processing unit 206, a knowledge database 108, and/or a transceiver 208. The processor 202 may be communicatively coupled to the memory 204, the pre-processing unit 206, the knowledge database 108, and/or the transceiver 208. A person of ordinary skill in the art will appreciate that in an implementation, the knowledge database 108 may be integrated with the brand equity determination engine 102 as depicted in FIG. 2. In an alternate implementation, the knowledge database 108 may be an entity that is remotely located with respect to the brand equity determination engine 102 as, depicted in FIG. 1.

[031] The processor 202 may include suitable logic, circuitry, interfaces, and/or code that may be configured to execute a set of instructions stored in the memory 204. The processor 202 may be configured to register the plurality of users with the brand equity determination engine 102. The processor 202 may further track the exchange of one or more services between the users registered with the brand equity determination engine 102. Examples of the processor 202 may be an X86-based processor, a Reduced Instruction Set Computing (RISC) processor, an Application-Specific Integrated Circuit (ASIC) processor, a Complex Instruction Set Computing (CISC) processor, and/or other processors.

[032] The memory 204 may include suitable logic, circuitry, and/or interfaces that may be configured to store a machine code and/or a computer program with at least one code section

executable by the processor 202. In an embodiment, the memory 204 may be configured to store (permanently or temporarily) the travel data of the users. In an embodiment, the memory 204 may be configured to store the parameters such as pre-processed data 210, design drivers 212, and/or equity associations 214. Examples of implementation of the memory 204 may include, but are not limited to, Random Access Memory (RAM), Read Only Memory (ROM), Hard Disk Drive (HDD), and/or a Secure Digital (SD) card.

[033] The knowledge database 108 may include suitable logic, circuitry, interfaces, and/or code that may be configured to store to store the knowledge graph depicted in FIG. 1. In an implementation, for a given a sentence or a text, the knowledge graph comprises a semantic representation of the text which is a labelled directed graph. A person of ordinary skill in the art will appreciate that the knowledge graph aims at maximizing the extraction of contextual relations of each sentence and stored them in the knowledge graph as a semantic triple in Resource Description Framework (RDF) triples.

[034] The pre-processing unit 206 may include suitable logic, circuitry, interfaces, and/or code that may be configured to pre-process a corpus of data to covert the corpus of data into a structured dataset. In an implementation, the pre-processing unit 206 may comprise a spam filter 216, a context filter 218, a tokenizer 220, a special character removing unit 222, and/or an emoticon removing unit 224. The details of the individual units of the pre-processing unit have been explained in detail in following sections of the disclosure.

[035] The transceiver 208 may include suitable logic, circuitry, interfaces, and/or code that may be configured to facilitate communication of the brand equity determination engine 102 with the plurality of digital platforms 106. The transceiver 208 may be implemented based on known technologies to support wired or wireless communication. The transceiver 208 may include, but is not limited to, an antenna, a radio frequency (RF) transceiver, one or more amplifiers, a tuner, one or more oscillators, a digital signal processor, a coder-decoder (CODEC) chipset, a subscriber identity module (SIM) card, and/or a local buffer. The transceiver 208 may communicate via wireless communication with networks, such as the Internet, an Intranet and/or a wireless network, such as a cellular telephone network, a wireless local area network (LAN) and/or a metropolitan area network (MAN). The wireless communication may use any of a plurality of communication standards, protocols and technologies, such as Global System for

Mobile Communications (GSM), Enhanced Data GSM Environment (EDGE), wideband code division multiple access (W-CDMA), code division multiple access (CDMA), Long Term Evolution (LTE), time division multiple access (TDMA), Bluetooth, Wireless Fidelity (Wi-Fi) (such as IEEE 802.11a, IEEE 802.11b, IEEE 802.11g and/or IEEE 802.11n), voice over Internet
5 Protocol (VoIP), Wi-MAX, a protocol for email, instant messaging, and/or Short Message Service (SMS).

[036] In operation, upon receiving a request from a user (not shown) to determine and compare brand equity of a brand associated with one or more products, wherein the products belong to the plurality of product categories 104. In an embodiment, the product may belong to a
10 category (such financial products 104₂), and the processor 202 may be configured to accumulate a corpus of data from a plurality of digital platforms 106. The corpus of data relates to a category of the one or more products 104₁ – 104_n, which happens to be “finance” in this case. The corpus of data may be received by the processor 202 from the plurality of digital platforms 106, via the transceiver 208.

[037] In an embodiment, the processor 202 may be configured to pre-process accumulated the corpus of data to covert the corpus of data into a structured dataset. In an embodiment, the pre-processing by the pre-processing unit 206, in conjunction with the spam filter 216, may be configured to perform spam filtering on the corpus of data to remove spam. The pre-processing unit 206, in conjunction with the context filter 218, may be further configured to filter
20 the context from the residual corpus of data to remove the irrelevant context from the residual corpus of data. The pre-processing unit 206, in conjunction with the tokenizer 220, may be further configured to perform sentence tokenization and/or word tokenization, of the corpus data on which context filtering has been performed, to generate corpus of data split into sentences. Thereafter, the pre-processing unit 206, in conjunction with the special character removing unit 222, may be
25 configured to remove the special characters from the individual sentences constituting the generated corpus of data. Subsequently, the pre-processing unit 206, in conjunction with the emoticon removing unit 224, may be configured to remove the special characters from the individual sentences constituting the generated corpus of data, to covert the corpus of data into the structured dataset.

[038] Using the structured dataset, the processor 202 may be configured to determine one or more design attributes indicative of subject and objects present in one or more sentences constituting the structured dataset, based on part-of-speech (POS) tagging performed on the structured dataset. In an embodiment, processor 202 may be configured to interpret the sentences
5 of the structured dataset by understanding the contextual meaning of the phrases constituting the structured dataset. The processor 202 may be further configured to identify subjects in a sentence using a combination of part of speech, such as a noun, a proper noun, constituting aspects, and entity recognition. In an embodiment, the processor 202 is further configured to perform at least a pronoun resolution, subsequent to the POS tagging, by resolving one or more pronouns present in
10 the structured dataset by resolving co-references of all anaphores and cataphores. In an embodiment, resolution of co-references between anaphores and cataphores is crucial to analyzing a sentence. This process ensures every pronoun, such as this, that, he, she, these, they and the like, are resolved and mapped to their corresponding entities in the sentence or a paragraph. The present invention provides a highly accurate method for accomplishing the aforesaid objective and ensures
15 the right meaning and relationship are mapped to each other, thereby assisting in further analysis of the structured dataset.

[039] In an exemplary scenario, when structured dataset created based on the accumulated corpus of data may correspond to a product belonging to the category 104_N. Further, the sentence which may be part of the structured dataset may be determined as “These diapers are
20 wonderful! They are extremely soft and fit great”. In the instant scenario, the processor 202 may be configured to perform POS tagging on the aforesaid sentence and may be configured to tag “These diapers” as Noun, “are” as the Verb, and “wonderful” as the adjective. Further, the processor 202 may tag the remainder of the sentence with POS tags, which may be the following: “they” as Pronoun, “are” and “fit” as Verb, “extremely”, “soft”, and “great” as Adjective, and
25 “and” as Conjunction.

[040] The processor 202 may be configured to provide the structured dataset to an artificial intelligence (AI) model pipeline for further insight generation. In an embodiment, the AI models used may, include, but is not limited to, Named entity recognition (NER) module, POS tagging module, sentence tokenizer, lemmatization module, language detection module, spell

check module, pronoun resolution module, relevance filtering module, subject-object-predicate determination module, aspect analyzer, sentiment assigner, cluster generator.

[041] In an embodiment, the processor 202, based on the application of AI models on the structured dataset, may be configured to cluster the one or more sentences into a plurality of coherent clusters based on semantic and contextual similarity, which in simpler terms involves sentences having same meaning or talking about the same thing. The coherence between the clusters may be a function of a semantic relevancy between the various clusters that may be identified by the processor 202. Such clustering by the processor 202 ensures that sentences in the structured dataset comprising ideas that are similar, get clustered together in a single cluster. Additionally, the processor 202 may be configured to leverage the knowledge graphs stored in the knowledge database 108 for nomenclature of the identified clusters and subsequently performing the clustering. Using the knowledge graph, the processor 202 may be configured to assign a name to each cluster, based on theme of the sentences within that cluster. In an exemplary scenario, when the sentences in given “cluster A” discuss a price of a product and mention that the product is expensive, then the name of the cluster from the knowledge graph may be assigned as “Expensive product”.

[042] Additionally, in an implementation, creation of an entry in the knowledge graph comprises: resolving a tokenized sentence all co-references and pronouns; disambiguating the complex sentences in the resolved sentence to simple independent sentences with a single sub clauses; identifying rhetorical relations between the sentences; extracting subject, predicate and object from each sentence, merging all the extracted relations into a relation graph (knowledge graph) as a directed graph; and adding all the sentences, which are semantically similar under a same node in the knowledge graph.

[043] As stated in FIG. 1 and the description above, the knowledge graphs may be organically created, and which holistically represent all the cluster’s constituents. In an embodiment, the clustering forms the basis of determination of the equity drivers downstream. In an embodiment, based on a frequency, a relevance and an engagement of each sentence in the cluster, the strength of the equity drivers may be measured by the processor 202, which may be used for the determination of brand equity of brand associated with various products of brands belonging to a particular category.

[044] The processor 202 may be configured to identify, for each product (belonging to financial products 104₂) of various brands, a set of design drivers 212 from the one or more design attributes. The determination of the design drivers 212 may be based on at least a relevance of a design driver to each product from the one or more products. In an embodiment, the processor 202 may be configured to store the identified design drivers 212 in the memory 204.

[045] In an embodiment, the processor 202 may be configured to scale each of the determined design drivers from the set of design drivers 212, on pre-defined scales of equity association 214. In an embodiment, the pre-defined scales are used for assessing one or more of: a sentiment polarity and a sentiment intensity, each of which is associated with a design driver of a product from the one or more products. The pre-defined scale for assessing the sentiment polarity may comprise: a positive category, a negative category, and a neutral category. The pre-defined scale for assessing the sentiment intensity may comprise: a good category, a better category, and a best category. The pre-defined scale comprises a continuous range of values for indicating strength of the sentiment polarity.

[046] The processor 202 may be configured to classify each of the equity associations 214 into a plurality of buckets, based on a frequency of occurrence of the equity associations 214. The processor 202 may be further configured to correlate the classified buckets of equity associations 214 with concepts defined in a knowledge graph stored in the knowledge database 108.

[047] In an embodiment, the processor 202 may be configured to determine a tone associated with each design driver from the set of design drivers 212, for the financial products 104₂. The processor 202 may be further configured to determine a brand equity for the product, based on the determined tone. When the brand equity is determined for products of all listed brands belonging to the product category, financial products 104₂, the processor 202 may be configured to rank the products on the basis of the determined brand equity. In an embodiment, the processor 202 may be configured to perform a more granular ranking of the brand equity of the brand, by adjusting the weights assigned to a design driver 212. This may help in determining and comparing the products' equity on the basis of individual design drivers and presents a microscopic picture of what measures need to be taken in order to boost the holistic brand equity of a brand associated with.

[048] FIGs. 3A and 3B collectively depict a flow diagram of a detailed exemplary process for generating a travel plan for a user, in accordance with some embodiments of the present disclosure. With reference to FIGs. 3A and 3B, there is shown a flow chart 300. The flow chart 300 is described in conjunction with FIGs. 1 and 2. The process starts at step 302 and proceeds to step 304.

[049] At step 304, a corpus of data from a plurality of digital platforms is accumulated. The corpus of data relates to a category of the one or more products whose brand equity is to be determined. Further, the plurality of digital platforms comprise one or more of: social media platforms, e-commerce websites, forums, blogs.

[050] At step 306, the corpus of data is pre-processed to convert the corpus of data into a structured dataset. The steps of pre-processing have been detailed in the FIG. 4. At step 308, based on part-of-speech (POS) tagging performed on the structured dataset having tokenized text, one or more design attributes indicative of subject and objects present in one or more sentences constituting the structured dataset are determined. In an embodiment, subsequent to the POS tagging, pronoun resolution is performed by resolving one or more pronouns present in the structured dataset by resolving co-references of all anaphores and cataphores.

[051] At step 310, for each product from the one or more products, a set of design drivers from the one or more design attributes are identified, based on at least a relevance of a design driver to each product from the one or more products. At step 312, each of the design drivers from the set of design drivers are scaled on pre-defined scales of equity association.

[052] At step 314, each of the equity associations are classified into a plurality of buckets, based on a frequency of occurrence of the equity associations. At step 316, the classified buckets of equity associations are correlated with the one or more concepts defined in a knowledge graph. Further, a tone associated with each design driver from the set of design drivers is determined for each of the products.

[053] At step 318, a brand equity for each product from the one or more products is determined, based on the determined tone. The control passes to end step 320.

[054] FIG. 4 is a block diagram of exemplary process for pre-processing a corpus of data to convert the corpus of data into a structured dataset, for determining brand equity of a brand

associated with from the one or more products, in accordance with some embodiments of the present disclosure. With reference to FIG. 4, there is shown a flow chart 400. The flow chart 400 is described in conjunction with FIG's. 1 to 3. The process starts at step 402 and proceeds to step 404.

5 [055] At step 404, spam filtering is performed by the processor 202, on the corpus of data to remove spam, for pre-processing the corpus of data to covert the corpus of data into a structured dataset. At step 406, the context from the residual corpus of data may be filtered by the processor 202 for removing the irrelevant context from the residual corpus of data.

10 [056] At step 408, sentence tokenization and/or word tokenization, of the corpus data on which context filtering has been performed may be performed by the processor 202 for generating corpus of data split into sentences. Thereafter, at step 410, the special characters from the individual sentences constituting the generated corpus of data may be removed by the processor 202. Subsequently, at step 412, special characters may be removed by the processor 202, from the individual sentences constituting the generated corpus of data, for converting the corpus of data
15 into the structured dataset. The control passes to end step 414.

 [057] As will be also appreciated, the above described techniques may take the form of computer or controller implemented processes and apparatuses for practicing those processes. The disclosure can also be embodied in the form of computer program code containing instructions embodied in tangible media, such as floppy diskettes, CD-ROMs, hard drives, or any other
20 computer-readable storage medium, wherein, when the computer program code is loaded into and executed by a computer or controller, the computer becomes an apparatus for practicing the invention. The disclosure may also be embodied in the form of computer program code or signal, for example, whether stored in a storage medium, loaded into and/or executed by a computer or controller, or transmitted over some transmission medium, such as over electrical wiring or
25 cabling, through fiber optics, or via electromagnetic radiation, wherein, when the computer program code is loaded into and executed by a computer, the computer becomes an apparatus for practicing the invention. When implemented on a general-purpose microprocessor, the computer program code segments configure the microprocessor to create specific logic circuits.

 [058] The specification has described system and method for determining brand equity
30 of a brand associated with one or more products. The illustrated steps are set out to explain the

exemplary embodiments shown, and it should be anticipated that ongoing technological development will change the manner in which particular functions are performed. These examples are presented herein for purposes of illustration, and not limitation. Further, the boundaries of the functional building blocks have been arbitrarily defined herein for the convenience of the description. Alternative boundaries can be defined so long as the specified functions and relationships thereof are appropriately performed. Alternatives (including equivalents, extensions, variations, deviations, etc., of those described herein) will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein. Such alternatives fall within the scope and spirit of the disclosed embodiments.

[059] Furthermore, one or more computer-readable storage media may be utilized in implementing embodiments consistent with the present disclosure. A computer-readable storage medium refers to any type of physical memory on which information or data readable by a processor may be stored. Thus, a computer-readable storage medium may store instructions for execution by one or more processors, including instructions for causing the processor(s) to perform steps or stages consistent with the embodiments described herein. The term “computer-readable medium” should be understood to include tangible items and exclude carrier waves and transient signals, i.e., be non-transitory. Examples include random access memory (RAM), read-only memory (ROM), volatile memory, nonvolatile memory, hard drives, CD ROMs, DVDs, flash drives, disks, and any other known physical storage media.

[060] It is intended that the disclosure and examples be considered as exemplary only, with a true scope and spirit of disclosed embodiments being indicated by the following claims.

CLAIMS

1. A method of determining brand equity of a brand associated with one or more products, the method comprising:

5 accumulating, by a brand equity determination engine, a corpus of data from a plurality of digital platforms, wherein the corpus of data relates to a category of the one or more products whose brand equity is to be determined;

 pre-processing, by the brand equity determination engine, the corpus of data to covert the corpus of data into a structured dataset;

10 determining, by the brand equity determination engine, based on part-of-speech (POS) tagging performed on the structured dataset, one or more design attributes indicative of subject and objects present in one or more sentences constituting the structured dataset;

 identifying, by the brand equity determination engine, for each product from the one or more products, a set of design drivers from the one or more design attributes, based on at least a relevance of a design driver to each product from the one or more products;

15 scaling, by the brand equity determination engine, each of the design drivers from the set of design drivers, on pre-defined scales of equity association;

 classifying, by the brand equity determination engine, each of the equity associations into a plurality of buckets, based on a frequency of occurrence of the equity associations;

20 correlating, by the brand equity determination engine, the classified buckets of equity associations with concepts defined in a knowledge graph, to determine a tone associated with each design driver from the set of design drivers, for each of the products; and

25 determining, by the brand equity determination engine, a brand equity for the brand associated with each product from the one or more products, based on the determined tone.

2. The method of claim 1 wherein the plurality of digital platforms comprise one or more of: social media platforms, e-commerce websites, forums, blogs.

3. The method of claim 1 further comprising ranking the products from the one or more products, based on the determined brand equity.

4. The method of claim 1, wherein the pre-processing comprises:

5 performing spam filtering on the corpus of data to remove spam;
filtering the context from the residual corpus of data to remove the irrelevant context from the residual corpus of data;

performing sentence tokenization and word tokenization, of the corpus data on which context filtering has been performed, to generate corpus of data split into sentences;
10 and

removing special characters from the individual sentences constituting the generated corpus of data, to covert the corpus of data into the structured dataset.

15 5. The method of claim 4, wherein the special characters comprise one or more of: punctuations, emoticons, Unicode characters.

6. The method of claim 4 further comprising clustering the one or more sentences into a plurality of coherent clusters based on semantic and contextual similarity.

20 7. The method of claim 1, wherein the pre-defined scales are used for assessing one or more of: a sentiment polarity and a sentiment intensity, each of which is associated with a design driver of a product from the one or more products.

25 8. The method of claim 7, wherein the pre-defined scale for assessing the sentiment polarity may comprise: a positive category, a negative category, and a neutral category.

5 9. The method of claim 7, wherein the pre-defined scale for assessing the sentiment intensity may comprise: a good category, a better category, and a best category, and wherein the pre-defined scale comprises a continuous range of values for indicating strength of the sentiment polarity.

10 10. The method of claim 1, further comprises performing at least a pronoun resolution, subsequent to the POS tagging, by resolving one or more pronouns present in the structured dataset by resolving co-references of all anaphores and cataphores.

11. A system for determining brand equity of a brand associated with one or more products, the system comprising:

a hardware processor; and

15 a memory storing instructions for execution by the hardware processor, wherein the hardware processor is configured by the instructions to:

accumulate a corpus of data from a plurality of digital platforms, wherein the corpus of data relates to a category of the one or more products whose brand equity is to be determined;

20 pre-process the corpus of data to covert the corpus of data into a structured dataset;

determine based on part-of-speech (POS) tagging performed on the structured dataset, one or more design attributes indicative of subject and objects present in one or more sentences constituting the structured dataset;

25 identify, for each product from the one or more products, a set of design drivers from the one or more design attributes, based on at least a relevance of a design driver to a product from the one or more products;

scale each of the design drivers from the set of design drivers on pre-defined scales of equity association;

5 classify, for each of the products, each of the equity associations into a plurality of buckets, based on a frequency of occurrence of the equity associations in the structured dataset;

 correlate the classified buckets of equity associations with concepts defined in a knowledge graph, to determine a tone associated with each design driver from the set of design drivers, for each of the products; and

10 determine a brand equity for the brand associated with each product from the one or more products, based on the determined tone.

12. The system of claim 11, wherein the plurality of digital platforms comprise one or more of: social media platforms, e-commerce websites, forums, blogs.

15 13. The system of claim 11, wherein the processor is further configured to rank the products from the one or more products, based on the determined brand equity.

14. The system of claim 11, wherein the pre-processing comprises:

 performing spam filtering on the corpus of data to remove spam;

20 filtering the context from the residual corpus of data to remove the irrelevant context from the residual corpus of data;

 performing sentence tokenization and word tokenization, of the corpus data on which context filtering has been performed, to generate corpus of data split into sentences; and

25 removing special characters from the individual sentences constituting the generated corpus of data, to covert the corpus of data into the structured dataset.

15. The system of claim 13, wherein the special characters comprise one or more of: punctuations, emoticons, Unicode characters.
- 5 16. The system of claim 14, wherein the processor is further configured to cluster the one or more sentences into a plurality of coherent clusters based on semantic and contextual similarity.
- 10 17. The system of claim 11, wherein the pre-defined scales are used for assessing one or more of: a sentiment polarity and a sentiment intensity, each of which is associated with a design driver of a product from the one or more products.
18. The system of claim 16, wherein the pre-defined scale for assessing the sentiment polarity may comprise: a positive category, a negative category, and a neutral category.
- 15 19. The system of claim 16, wherein the pre-defined scale for assessing the sentiment intensity may comprise: a good category, a better category, and a best category, and wherein the pre-defined scale comprises a continuous range of values for indicating strength of the sentiment polarity.
- 20 20. The system of claim 11, wherein the processor is further configured to perform at least a pronoun resolution, subsequent to the POS tagging, by resolving one or more pronouns present in the structured dataset by resolving co-references of all anaphores and cataphores.