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Anonymous Anonymous

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CONSUMPTION REPORT FOR IMPROVING DIGITAL MEDIA LITERACY

BRIEF DESCRIPTION OF THE DRAWINGS

[0001] The accompanying drawings illustrate a number of exemplary embodiments and are a part of the specification. Together with the following description, these drawings demonstrate and explain various principles of the present disclosure.

[0002] FIG. 1 is a block diagram of an exemplary system for improving digital media literacy by creating a consumption report.

[0003] FIG. 2 is a diagram of an exemplary system for improving digital media literacy by creating a consumption report.

[0004] FIG. 3 is a flow diagram of an exemplary method for improving digital media literacy by creating a consumption report.

[0005] FIG. 4 is a diagram of scores used for creating a consumption report.

[0006] FIG. 5A is a table of exemplary factors for determining an integrity score.

[0007] FIG. 5B is a table of exemplary factors for determining a user value score.

[0008] FIG. 6 is a diagram of an exemplary label for presenting a consumption report.

[0009] FIG. 7 is a diagram of an exemplary presentation of a consumption report.

[0010] Throughout the drawings, identical reference characters and descriptions indicate similar, but not necessarily identical, elements. While the exemplary embodiments described herein are susceptible to various modifications and alternative forms, specific embodiments have been shown by way of example in the drawings and will be described in detail herein. However, the exemplary embodiments described herein are not intended to be limited

to the particular forms disclosed. Rather, the present disclosure covers all modifications, equivalents, and alternatives falling within the scope of the appended claims.

DETAILED DESCRIPTION OF EXEMPLARY EMBODIMENTS

[0011] Users consume a large amount of media content from various online sources. Although some of the media content may be published by established media sources, other media content may be published by questionable sources. For example, media content may be published by advertisers, scammers, and other sources that may have hidden agendas. Often, the media content published by these questionable sources may resemble legitimate content while espousing misinformation such as incorrect facts, offensive content, subversive ideas, etc. In addition, certain sources may actively attempt to deceive users.

[0012] Traditionally, users may not have many resources to aid in discerning between media content from legitimate sources and media content from questionable sources, and many users may have limited media literacy. For instance, users may recognize traditional media sources, such as established news organizations, but may have difficulty recognizing disingenuous sources. Users' limited media literacy may further influence their consumption diets. Consuming too much media from disingenuous or otherwise questionable sources as compared to media from legitimate sources may imbalance users' consumption diets such that users may be exposed to more misinformation than genuine information.

[0013] The present disclosure is generally directed to improving digital media literacy and encouraging a balanced media consumption diet. As will be explained in greater detail below, embodiments of the present disclosure may provide a consumption diet for a user when the user interacts with an entity (e.g., a page, a group, a profile, an event, etc.). The consumption diet may

present how much of the user's daily media content consumption applies to various content attributes such that the user may be better informed about how much trustworthy content he or she has consumed. The consumption diet may be updated based on an entity score for the entity that the user interacted with. The entity score may indicate an overall value of content from the entity and may be calculated based on an integrity score and user value score for the entity. The integrity score may be based on signals that reflect the entity's behavior. The user value score may be based on signals that reflect behavior of the entity's audience.

[0014] Embodiments of the present disclosure may provide a number of features and advantages over traditional systems that are not configured to evaluate entities. Traditional systems may not provide easily accessible information to improve a user's media literacy based on aggregating real-time signals. Embodiments of the present disclosure may leverage signals from an online community to better evaluate trustworthiness of entities.

[0015] Embodiments of the present disclosure may provide a method for presenting a consumption diet for a user. Additionally, embodiments of the present disclosure may improve the functioning of a computer by efficiently collecting data globally and customizing analyses for each user without requiring a full analysis process for each user. Moreover, the embodiments of the instant disclosure may improve the field of network communication, for example, by providing objective analysis for published content. These and other features and advantages may be enabled by the embodiments discussed herein.

[0016] Features from any of the embodiments described herein may be used in combination with one another in accordance with the general principles described herein. These

and other embodiments, features, and advantages will be more fully understood upon reading the following detailed description in conjunction with the accompanying drawings and claims.

[0017] The following will provide, with reference to FIGS. 1-7, detailed descriptions of improving digital media literacy by creating consumption reports. Detailed descriptions of example systems for improving digital media literacy by creating consumption reports will be provided in connection with FIGS. 1-2. Detailed descriptions of corresponding computer-implemented methods will be provided in connection with FIG. 3. Detailed descriptions of calculating scores and determining consumption reports will be provided in connection with FIG. 4. Detailed descriptions of factors for calculating scores will also be provided in connection with FIG. 5. In addition, detailed descriptions of an example consumption report will be provided in connection with FIGS. 6 and 7.

[0018] FIG. 1 is a block diagram of an example system 100 for determining consumption reports. As illustrated in this figure, example system 100 may include one or more modules 102 for performing one or more tasks. As will be explained in greater detail below, modules 102 may include a detection module 104, an integrity score module 106, a user value score module 108, an entity score module 110, a consumption report module 112, and a presentation module 114. Although illustrated as separate elements, one or more of modules 102 in FIG. 1 may represent portions of a single module or application.

[0019] In certain embodiments, one or more of modules 102 in FIG. 1 may represent one or more software applications or programs that, when executed by a computing device, may cause the computing device to perform one or more tasks. For example, and as will be described in greater detail below, one or more of modules 102 may represent modules stored and

configured to run on one or more computing devices, such as the devices illustrated in FIG. 2 (e.g., computing device 202 and/or server 206). One or more of modules 102 in FIG. 1 may also represent all or portions of one or more special-purpose computers configured to perform one or more tasks.

[0020] As illustrated in FIG. 1, example system 100 may also include one or more memory devices, such as memory 140. Memory 140 generally represents any type or form of volatile or non-volatile storage device or medium capable of storing data and/or computer-readable instructions. In one example, memory 140 may store, load, and/or maintain one or more of modules 102. Examples of memory 140 include, without limitation, Random Access Memory (RAM), Read Only Memory (ROM), flash memory, Hard Disk Drives (HDDs), Solid-State Drives (SSDs), optical disk drives, caches, variations or combinations of one or more of the same, and/or any other suitable storage memory.

[0021] As illustrated in FIG. 1, example system 100 may also include one or more physical processors, such as physical processor 130. Physical processor 130 generally represents any type or form of hardware-implemented processing unit capable of interpreting and/or executing computer-readable instructions. In one example, physical processor 130 may access and/or modify one or more of modules 102 stored in memory 140. Additionally or alternatively, physical processor 130 may execute one or more of modules 102 to facilitate determining consumption reports. Examples of physical processor 130 include, without limitation, microprocessors, microcontrollers, Central Processing Units (CPUs), Field-Programmable Gate Arrays (FPGAs) that implement softcore processors, Application-Specific Integrated Circuits

(ASICs), portions of one or more of the same, variations or combinations of one or more of the same, and/or any other suitable physical processor.

[0022] As illustrated in FIG. 1, example system 100 may also include one or more additional elements 120, such as an integrity score 122, a user value score 124, an entity score 126, and a consumption report 128. In some embodiments, the term “integrity score” may refer to a quantitative assessment of a behavior of an entity. In some embodiments, the term “user value score” may refer to a quantitative assessment of a behavior of an audience of an entity. In some embodiments, the term “entity score” may refer to a quantitative assessment of an entity with respect to a positive or negative impact on digital media literacy. In some embodiments, the term “consumption report” may refer to a quantitative assessment of a user’s digital media consumption during a specified time period. Integrity score 122, user value score 124, entity score 126, and/or consumption report 128 may be stored in memory 140.

[0023] Example system 100 in FIG. 1 may be implemented in a variety of ways. For example, all or a portion of example system 100 may represent portions of example system 200 in FIG. 2. As shown in FIG. 2, system 200 may include a computing device 202 in communication with a server 206 via a network 204. In one example, all or a portion of the functionality of modules 102 may be performed by computing device 202, server 206, and/or any other suitable computing system. As will be described in greater detail below, one or more of modules 102 from FIG. 1 may, when executed by at least one processor of computing device 202 and/or server 206, enable computing device 202 and/or server 206. For example, and as will be described in greater detail below, one or more of modules 102 may cause computing device 202 and/or server 206 to detect a user’s interaction with digital media content provided by an entity, determine an

integrity score for the entity, determine a user value score for the entity, calculate an entity score for the entity based on the integrity score and the user value score, determine a consumption report for the user based on the entity score, and presenting the consumption report to the user.

[0024] Computing device 202 generally represents any type or form of computing device capable of reading computer-executable instructions. For example, computing device 202 may be client device such as a mobile device. Additional examples of computing device 202 include, without limitation, laptops, tablets, desktops, servers, cellular phones, Personal Digital Assistants (PDAs), multimedia players, embedded systems, wearable devices (e.g., smart watches, smart glasses, etc.), smart vehicles, smart packaging (e.g., active or intelligent packaging), gaming consoles, so-called Internet-of-Things devices (e.g., smart appliances, etc.), variations or combinations of one or more of the same, and/or any other suitable computing device.

[0025] Server 206 generally represents any type or form of computing device that is capable of accessing digital media content for analyzing entities. For example, server 206 may be an internet server connected with various social networking systems. Additional examples of server 206 include, without limitation, security servers, application servers, web servers, storage servers, and/or database servers configured to run certain software applications and/or provide various security, web, storage, and/or database services. Although illustrated as a single entity in FIG. 2, server 206 may include and/or represent a plurality of servers that work and/or operate in conjunction with one another. In some implementations, server 206 may be integrated with computing device 202.

[0026] Network 204 generally represents any medium or architecture capable of facilitating communication or data transfer. In one example, network 204 may facilitate communication between computing device 202 and server 206. In this example, network 204 may facilitate communication or data transfer using wireless and/or wired connections. Examples of network 204 include, without limitation, an intranet, a Wide Area Network (WAN), a Local Area Network (LAN), a Personal Area Network (PAN), the Internet, Power Line Communications (PLC), a cellular network (e.g., a Global System for Mobile Communications (GSM) network), portions of one or more of the same, variations or combinations of one or more of the same, and/or any other suitable network.

[0027] FIG. 3 is a flow diagram of an exemplary computer-implemented method 300 for determining a consumption report to improve digital media literacy. The steps shown in FIG. 3 may be performed by any suitable computer-executable code and/or computing system, including the system(s) illustrated in FIGS. 1-2. In one example, each of the steps shown in FIG. 3 may represent an algorithm whose structure includes and/or is represented by multiple sub-steps, examples of which will be provided in greater detail below.

[0028] As illustrated in FIG. 3, at step 310 one or more of the systems described herein may detect a user's interaction with digital media content provided by an entity. For example, detection module 104 in FIG. 1 may, as part of computing device 202 and/or server 206 in FIG. 2, detect a user's interaction with digital media content provided by an entity, as will be described further below.

[0029] In some embodiments, the term "entity" may refer to a social media or other online representation of a user and/or organization. Examples of entities include, without

limitation, social media profiles, social media pages, websites, social media groups, social media events, etc.

[0030] Detection module 104 may initiate a process for generating a consumption report based on detecting a user interaction, such as a user interaction 405 in FIG. 4. FIG. 4 illustrates a simple data flow 400 for generating a consumption report. FIG. 4 includes user interaction 405, an entity 420, an integrity score 422, a user value score 424, an entity score 426, a user 410, a user categorization 412, daily values 414, and a consumption report 428. User interaction 405 may include user 410 interaction with entity 420, such as user 410 viewing or previewing digital media content associated with entity 420. User 410 may be, for instance, a user active on a social network. Entity 420 may be, for instance, an entity which publishes content on the social network.

[0031] The systems described herein may detect the user's interaction with digital media content in a variety of ways. Detection module 104 may, as part of computing device 202 and/or server 206 in FIG. 2, detect user interaction 405 in FIG. 4. In one example, detection module 102 may detect user 410 hovering over a link associated with entity 420, such as when user 410 is presented a preview post published by entity 420. In another example, detection module 104 may detect user 410 viewing media content associated with entity 420, such as visiting the post or clicking on the link. In yet another example, detection module 104 may detect user 410 liking the media content and/or entity 420. In other examples, detection module 104 may detect other interactions user 410 may have with entity 420. Although user interaction 405 may generally include indirect interactions of user 410 with entity 420, such as interactions

leading up to direct interactions as described above, user interaction 405 may also include direct interactions, such as messaging or commenting on a post from entity 420.

[0032] Returning to FIG. 3, at step 320 one or more of the systems described herein may determine an integrity score for the entity. The integrity score may be associated with a behavior of the entity. For example, integrity score module 106 in FIG. 1 may, as part of computing device 202 and/or server 206 in FIG. 2, determine integrity score 122 for the entity.

[0033] In some embodiments, integrity score 422, which may correspond to integrity score 122, may refer to a score that reflects a behavior of an entity by considering various integrity factors for the entity. Examples of integrity factors may include, without limitation, content originality, level of misinforming, level of scamming, level of spamming, level of ad farming, level of click baiting, quality of content, amount of misconduct, and level of impersonating.

[0034] The systems described herein may perform step 320 in a variety of ways. In one example, integrity score module 106 may, as part of computing device 202 and/or server 206 in FIG. 2, initially identify a controlling entity of entity 420. The controlling entity may be entity 420 itself. Alternatively, the controlling entity may be a separate entity. For example, entity 420 may be owned by or is a subsidiary of the controlling entity. Integrity score module 106 may determine the controlling entity based on ownership. In other instances, integrity score module 106 may determine the controlling entity based on authorship, such as the person or persons responsible for generating the media content associated with entity 420. In certain instances, entity 420 may change controlling entities, which may ultimately change or otherwise affect a behavior of entity 420. For example, the controlling entity may have acquired entity 420 based

on name recognition. However, after acquiring entity 420, the controlling entity may promote its own agenda via entity 420. Entity 420 may exhibit topic shift, in which the topic of content from entity 420 changes after the controlling entity acquires entity 420. Integrity score 422 for entity 420 may incorporate an integrity score for the controlling entity to account for topic shift.

[0035] Integrity score module 106 may analyze media content published by entity 420 to determine integrity score 422. Integrity score module 106 may analyze some or all media content published by entity 420 and aggregate the analysis to determine integrity score 422. In some examples, integrity score module 106 may limit an amount of media content analyzed. Integrity score module 106 may analyze a predetermined amount or may restrict the amount based on a time period, such as the past year.

[0036] Integrity score module 106 may determine integrity score 422 based on various integrity factors using objective signals, such as user reports on behavior of entity 420. The user reports may be generated by third parties, such as independent news organization, security organization, or other organizations which may evaluate media content. FIG. 5A depicts a table 500 of integrity factors and possible value ranges for each integrity factor. The value ranges may be normalized and/or may be weighted such that certain factors may be more strongly considered than other factors. FIG. 5A includes the integrity factors of “copied content,” “misinformation,” “scam,” “spam,” “ad farms,” “click bait,” “content quality,” “repeat offenders,” and “impersonation,” although in other implementations fewer integrity factors and/or other integrity factors may be considered. Each of these factors is discussed in more detail below.

[0037] The term “copied content” may refer to whether the media content includes original content or copied content. The corresponding value range, such as 1-5, may refer to an amount of copied content and/or a percent of the total content that may be copied content. The copied content factor may favor original content to promote media literacy via dissemination of new information. Integrity score module 106 may determine the copied content factor from third party reporting and/or may directly compare the media content with other available content. A higher value may indicate that the media content has more copied content than original content, although in other implementations any other appropriate scoring metric may be used.

[0038] The term “misinformation” may refer to a veracity of the media content. Misinformation may include benign inaccuracies, such as mistakes in facts, and/or may include explicit falsehoods, such as disingenuous information intended to deceive users. Integrity score module 106 may determine misinformation based on third party reporting and/or comparison with content from trusted sources, such as educational institutions, established news organizations, etc. The misinformation factor may correspond to a value range, such as 1-5. A higher value may indicate that the media content has more misinformation than genuine information, although in other implementations any other appropriate scoring metric may be used.

[0039] The term “scam” may refer to media content published with fraudulent or deceptive intent. Such media content may be specifically designed to deceive users into submitting data, money, and/or other assets which may be leveraged for illicit monetary gain. Integrity score module 106 may determine whether the media content is a scam based on third party reporting and/or direct comparison with other known online scams. The scam factor may

correspond to a value range, such as 1-5. A higher value may indicate that the media content more strongly resembles a scam, although in other implementations any other appropriate scoring metric may be used.

[0040] The term “spam” may refer to commercial messages and unsolicited advertisements. Spam may be advertisements which appear as genuine media content. Integrity score module 106 may determine whether the media content is spam based on third party reporting and/or direct comparison with other known spam. The spam factor may correspond to a value range, such as 1-5. A higher value may indicate that the media content more strongly resembles spam, although in other implementations any other appropriate scoring metric may be used.

[0041] The term “ad farms” may refer to websites and other content that may be designed to generate advertising-based revenue via ad impressions. Ad farms may publish dubious content in order to falsely increase traffic. Integrity score module 106 may determine whether the media content resembles an ad farm based on third party reporting and/or direct comparison with other known ad farms. The ad farms factor may correspond to a value range, such as 1-5. A higher value may indicate that the media content more strongly resembles an ad farm, although in other implementations any other appropriate scoring metric may be used.

[0042] The term “click bait” may refer to a form of false advertisement using a link designed to attract attention and consume the linked content. The link may be sensationalized, misleading, or otherwise deceptive in order to make a user curious enough to click the link. Integrity score module 106 may determine whether the media content includes click bait based on third party reporting and/or direct comparison with other known click bait. The click bait

factor may correspond to a value range, such as 1-5. A higher value may indicate that the media content includes a higher degree of click bait, although in other implementations any other appropriate scoring metric may be used.

[0043] The term “content quality” may refer to a substantiality of media content published by the entity. For example, content containing fluff, sensationalism, poorly supported arguments, etc., may be of low quality. Content containing substantial factual information, verifiable information, articulated arguments, etc. may be of high quality. Integrity score module 106 may determine content quality based on third party reporting and/or direct analysis of media content from entity 420. The content quality factor may correspond to a value range, such as 1-5. A higher value may indicate a lower degree of quality, although in other implementations any other appropriate scoring metric may be used.

[0044] The term “repeat offenders” may refer to a degree to which an entity may exhibit negative content attributes (e.g., lack of originality, misinformation, scams, spam, ad farms, click bait, impersonation, etc.). Integrity score module 106 may determine whether entity 420 is a repeat offender based on third party reporting and/or direct historical analysis of entity 420. The repeat offenders factor may correspond to a value range, such as 1-5. A higher value may indicate a higher degree of repeat offending, although in other implementations any other appropriate scoring metric may be used.

[0045] The term “impersonation” may refer to a degree to which an entity may impersonate another entity. The impersonation may be explicit. For instance, an entity may copy a well-known entity to benefit from the recognition of the well-known entity. The impersonation may be malicious. For instance, an entity may copy a legitimate site as part of a phishing scam.

Integrity score module 106 may determine impersonation based on third party reporting and/or direct comparison with other entities. The impersonation factor may correspond to a value range, such as 1-5. A higher value may indicate a higher degree of impersonation, although in other implementations any other appropriate scoring metric may be used.

[0046] Integrity score 422 may include a value for each integrity factor. However, in other implementations, the values for the integrity factors may be combined into a single value.

[0047] Returning to FIG. 3, at step 330 one or more of the systems described herein may determine a user value score for the entity. The user value score may be associated with a behavior of an audience of the entity. For example, user value score module 108 in FIG. 1 may, as part of computing device 202 and/or server 206 in FIG. 2, determine user value score 124 for the entity.

[0048] In some embodiments, user value score 424, which may correspond to user value score 124, may refer to a score that reflects a behavior of an audience of the entity by considering various value factors relating to media content associated with the entity. Examples of value factors include, without limitation, content originality, authenticity of entity, verifiability of entity, interactions with the audience of the entity, and category of entity.

[0049] The systems described herein may perform step 330 in a variety of ways. In one example, user value score module 108 may, as part of computing device 202 and/or server 206 in FIG. 2, initially identify a controlling entity of entity 420. Similar to integrity score 422 described above, user value score 424 may incorporate a user value score for the controlling entity.

[0050] User value score module 108 may analyze media content published by entity 420 to determine user value score 424. User value score module 108 may analyze some or all media content published by entity 420 and aggregate the analysis to determine user value score 424. In some examples, user value score module 108 may limit an amount of media content analyzed. User value score module 108 may analyze a predetermined amount or may restrict the amount based on a time period, such as the past year. User value score module 108 may analyze a similar or same set of media content as was analyzed for determining integrity score 422.

[0051] User value score module 108 may determine user value score 424 based on various user value factors using objective signals, such as direct observation of user behavior of an audience of entity 420 or user reports describing the audience behavior of entity 420. The user reports may be generated by third parties, such as independent news organization, security organization, or other organizations which may evaluate media content. FIG. 5B depicts a table 501 of user value factors and possible value ranges for each user value factor. The value ranges may be normalized and/or may be weighted such that certain factors may be more strongly considered than other factors. FIG. 5B includes the user value factors of “originality,” “authenticity,” “verified,” “verified attributes,” “verifiable entity off-site,” “high # of transactions,” “high # of considerations,” and “page category,” although in other implementations fewer integrity factors and/or other integrity factors may be considered.

[0052] The term “originality” may refer to whether an audience behavior of an entity included original content. Original responses by the audience may indicate a value of the media content for a user. For example, if a post by the entity encourages original comments by users, the post may have value to other users. User value score module 108 may determine the

originality from third party reporting and/or direct observation of audience responses. The originality factor may correspond to a value range, such as 1-5. A higher value may indicate that the media content has a higher degree of original audience responses, although in other implementations any other appropriate scoring metric may be used.

[0053] The term “authenticity” may refer to whether the media content is affiliated with a topic and/or entity represented by the media content. For example, a fan page of another organization may indicate low authenticity. Fan pages may discourage media literacy as users may not receive information directly from the organization. Fan pages may also introduce bias into the media content. User value score module 108 may determine the authenticity from third party reporting and/or may directly analyze the media content. The corresponding value may be binary (e.g., 1 indicating authentic, 0 indicating inauthentic), although in other implementations any other appropriate scoring metric may be used.

[0054] The term “verified” may refer to whether an entity has been verified. For example, an entity on a social network may be verified by the social network (e.g., by a moderator or administrator of the social network) as the actual entity. The verification may confirm that the entity presented on the social network represents the actual entity such that the entity (e.g., user in control of the entity’s account) acting on behalf of the actual entity is authorized by the actual entity to do so. The verification may include verification of an official identity, business documentation and other official records, phone number and other contact information, postal address, and/or physical location. The social network may verify a physical location of the entity via physical mail (e.g., sending and/or receiving mail to/from the entity’s address), via GPS (e.g., confirming coordinates from a GPS-enabled device at the entity’s address), radio frequency

signature (e.g., recording device-level signals such as ambient Wi-Fi and/or cell tower data at the entity's location), and/or other location verification schemes. User value score module 108 may determine whether entity 420 is verified by confirming the verified status with the social network. The corresponding value may be binary (e.g., 1 indicating verified, 0 indicating unverified), although in other implementations any other appropriate scoring metric may be used.

[0055] The term “verified attributes” may refer to whether certain attributes associated with legitimate organization, such as email addresses, phone numbers, websites, etc. are verified. An entity lacking verified attributes may indicate an illegitimate entity. User value score module 108 may determine whether entity 420 has verified attributes based on third party reporting and/or directly verifying the attributes. The corresponding value may be binary (e.g., 1 indicating a complete set of verified attributes, 0 indicating an incomplete set of verified attributes), although in other implementations any other appropriate scoring metric may be used.

[0056] The term “verifiable entity off-site” may refer to whether an entity exists on other platforms, such as other social networks, commerce networks, news networks, etc. An entity existing on other platforms may be indicative of a legitimate entity. User value score module 108 may determine whether entity 420 is verified off-site based on third party reporting and/or direct analysis of other platforms. The corresponding value may be binary (e.g., 1 indicating verified off-site, 0 indicating unverified off-site), although in other implementations any other appropriate scoring metric may be used.

[0057] The term “high # of transactions” may refer to an amount of transactions between an entity and its audience. Transactions may include payments (e.g., as part of a purchase transaction) and conversions (e.g., ads clicked on by users). A higher number of transactions indicates users have significant interactions with the entity, which may further indicate that the entity provides value to users. User value score module 108 may determine whether entity 420 exhibits a high number of transaction based on third party reporting and/or direct analysis of user interaction with entity 420. The high # of transactions factor may correspond to a value range, such as 1-5. A higher value may indicate a higher degree of transactions, although in other implementations any other appropriate scoring metric may be used.

[0058] The term “high # of considerations” may refer to other interactions between users and an entity which may not be considered as transactions. Considerations may include, without limitation, visits to a physical location of the entity, messages to the entity, jobs provided by the entity, clicks to links within media content of the entity, etc. User value score module 108 may determine whether entity 420 exhibits a high number of considerations based on third party reporting and/or direct analysis of entity 420. The high # of considerations factor may correspond to a value range, such as 1-5. A higher value may indicate a higher degree of considerations, although in other implementations any other appropriate scoring metric may be used.

[0059] The term “page category” may refer to a category of media content from an entity. Page category may refer to types of content, such as news, shopping, video, etc., or may be organized by topic or any other categorization. Page category may indicate what type of content an entity tends to post. User value score module 108 may determine page category

based on third party reporting and/or direct analysis of media content. The page category factor may correspond to a single value, such as a category, although in other implementations any other appropriate value system for categories may be used.

[0060] User value score 424 may include a value for each user value factor. However, in other implementations, the values for the user value factors may be combined into a single value.

[0061] Turning back to FIG. 3, at step 340 one or more of the systems described herein may calculate an entity score for the entity based on the integrity score and the user value score. For example, entity score module 110 in FIG. 1 may, as part of computing device 202 and/or server 206 in FIG. 2, calculate entity score 126 based on integrity score 122 and user value score 124.

[0062] In some embodiments, entity score 426, which may correspond to entity score 126, may refer to a score that reflects a rating of an entity with respect to digital media literacy. Entity score 426 may indicate that media from entity 420 may enhance or detract a balanced media consumption by user 410. For example, a higher score may indicate a more positive influence (e.g., providing truthful, trustworthy, and/or accurate information) than a lower score indicating a more negative influence (e.g., providing false, biased, and/or inaccurate information). In other implementations, any other appropriate scoring metric may be used.

[0063] The systems described herein may perform step 340 in a variety of ways. In one example, entity score module 110 in FIG. 1 may, as part of computing device 202 and/or server 206 in FIG. 2, calculate entity score 426 based on combining integrity score 422 with user value score 424. In some implementations, entity score module 110 may normalize integrity

score 422 and user value score 424 for combining. For example, entity score module 110 may normalize integrity score 422 and user value score 424 such that higher score values may indicate positive influence. In some implementations, entity score module 110 may use a weighted average of integrity score 422 and user value score 424 such that entity score 426 may be more influenced by one of integrity score 422 or user value score 424. Entity score 426 may include a single value for quantitatively rating entity 420. Additionally or alternatively, entity score 426 may include additional values, such as values retained and/or derived from integrity score 422 and/or user value score 424.

[0064] Returning to FIG. 3, at step 350 one or more of the systems described herein may determine a consumption report for the user based on the entity score. The consumption report may indicate an amount of content consumed by the user during a time period for at least one of a plurality of content factors. The plurality of content factors may be associated with the behavior of the entity and the behavior of the audience of the entity. For example, consumption report module 112 in FIG. 1 may, as part of computing device 202 and/or server 206 in FIG. 2, determine consumption report 128 based on entity score 126.

[0065] In some embodiments, consumption report 428, which may correspond to consumption report 128, may refer to a categorical analysis of media consumption by user 410. As will be described further below, consumption report 428 may indicate, for each of multiple content factors, how much media content has been consumed by user 410. Consumption report 428 may indicate media consumption of user 410 over a specified period of time, such as today, a full day, a week, etc.

[0066] The systems described herein may perform step 350 in a variety of ways. In one example, consumption report module 112 may categorize user 410 based on demographics. User categorization 412 in FIG. 4 may include, without limitation, age, gender, country, location, etc. Consumption report module 112 may determine the content factors for consumption report 428 based on user categorization 412. For example, consumption report module 112 may determine that originality may be a relevant factor for user 410 who is in the United States. FIG. 6 illustrates a label 600 for presenting a consumption report 628 which may correspond to consumption report 428.

[0067] In FIG. 6, the content factors for consumption report 628 may include integrity factors 622 and user value factors 624. Integrity factors 622, which may correspond to the integrity factors depicted in FIG. 5A, may include “total low quality content,” “misinformation,” “spam,” “scam,” “click bait,” “community strikes,” “violence,” “objectionable content,” and “hate speech.” Community strikes may refer to content quality, as determined by a community of a social network, and may be associated with one or more of content quality, repeat offenders, and impersonation in FIG. 5A. Violence may refer to media content that include or induces violence, and may be associated with content quality and/or other factors in FIG. 5A. Objectionable content may refer to media content which may be offensive, and may be associated with content quality and/or other factors in FIG. 5A. Hate speech may refer to media content including hateful or derogatory language, for instance against a particular group of persons, and may be associated with content quality and/or other factors in FIG. 5A.

[0068] User value factors 624, which may correspond to the user value factors depicted in FIG. 5B, may include “original content,” “authentic source (verified),” “verified contact information,” and “high transaction volume.”

[0069] In FIG. 4, consumption report module 112 may incorporate daily values 414 into consumption report 428. Daily values 414 may include various other metrics that consumption report module 112 may use to determine consumption report 428. For instance, daily values 414 may include recommended daily values (e.g., how much or what percentage of total daily content consumption) for each content factor. The recommended daily values may be provided by third party reporting. Daily values 414 may also include consumption values for each content factor prior to user interaction 405. Consumption report module 112 may determine how much content from entity 420 that user 410 has consumed, and subsequently update daily values 414. Consumption report module 112 may include updated daily values 414 into consumption report 428. For example, in FIG. 6, each factor includes a percentage value which may indicate what percent of media consumed by user 410 applies to the factor. The percentage values may not add up to 100% as certain content may reflect multiple factors. In addition, in some examples, the percentage values may reflect average daily values, such as average daily values over the past week, as opposed to a single day’s worth of media consumption.

[0070] Turning back to FIG. 3, at step 360 one or more of the systems described herein may present the consumption report to the user. For example, presentation module 114 in FIG. 1 may, as part of computing device 202 and/or server 206 in FIG. 2, present consumption report 128 to the user.

[0071] The systems described herein may perform step 360 in a variety of ways. In one example, presentation module 114 may present consumption report 428 as a label that includes entity score 426. Label 600 in FIG. 6 includes entity score 626, which may correspond to entity score 426. Label 600 may also include a badge 629 which may indicate whether the entity has been verified as authentic.

[0072] Presentation module 114 may present consumption report 428 as a label that may appear over a preview of entity 420 and/or media content therefrom. FIG. 7 illustrates an exemplary screenshot 700 of an entity profile 720, which may correspond to entity 420, and a consumption report 728, which may correspond to consumption report 428 and appears similar to label 600. User interaction 405 may include user 410 hovering over entity profile 720 of entity 420, as illustrated in FIG. 7. Consumption report 728 may appear as a label over entity profile 720. In other implementations, consumption report 728 may appear differently, such as an inline element next to posts by entity 420.

[0073] According to the aspects described herein, a user who consumes digital media content, such as a social network user, may improve his or her digital media literacy. When the user interacts with media content from an entity, the social network may present a consumption report to the user. The social network may determine an entity score for the entity by quantitatively analyzing a quality of media content from the entity. The social network may incorporate the entity's behavior into the entity score, for instance by determining an integrity score for the entity based on user reports. The social network may also incorporate the entity's audience's behavior into the entity score, for instance by determining a user value score based on independent third-party media literacy bodies.

[0074] The social network may further customize the user's consumption report for the user. The social network may determine the user's demographics to determine what information to include in the user's consumption report. The consumption report may describe how much media content the user has consumed for various content factors. The content factors may reflect positive and/or negative aspects of digital media. The social network may update the consumption report based on the user's interaction with the entity. In some implementations, the social network may further determine recommended daily consumption values for each content factor.

[0075] The social network may present the consumption report to the user across various social media platforms. Advantageously, the consumption report may be displayed in real-time or near real-time as the user begins interacting with the entity. The user may then be able to better determine his or her media consumption, evaluate the entity, and decide whether to continue interacting with the entity.

[0076] Example Embodiments

[0077] Example 1: A computer-implemented method for improving digital media literacy may include detecting a user's interaction with digital media content provided by an entity; determining an integrity score for the entity, wherein the integrity score is associated with a behavior of the entity; determining a user value score for the entity, wherein the user value score is associated with a behavior of an audience of the entity; calculating an entity score for the entity based on the integrity score and the user value score; determining a consumption report for the user based on the entity score, wherein the consumption report indicates an amount of content consumed by the user during a time period for at least one of a plurality of

content factors, and wherein the plurality of content factors is associated with the behavior of the entity and the behavior of the audience of the entity; and presenting the consumption report to the user.

[0078] Example 2: The computer-implemented method of Example 1, further comprising identifying a controlling entity of the entity, wherein determining the integrity score comprises determining an integrity score for the controlling entity, and determining the user value score comprises determining a user value score for the controlling entity.

[0079] Example 3: The computer-implemented method of any of Examples 1 and 2, wherein determining the integrity score comprises: analyzing a plurality of integrity factors for at least one media content associated with the entity; and determining the integrity score based on aggregating the analysis for the at least one media content.

[0080] Example 4: The computer-implemented method of any of Examples 1-3, wherein the plurality of integrity factors includes at least one of content originality, level of misinforming, level of scamming, level of spamming, level of ad farming, level of click baiting, quality of content, amount of misconduct, or level of impersonating.

[0081] Example 5: The computer-implemented method of any of Examples 1-4, wherein determining the user value score comprises: analyzing a plurality of value factors for at least one media content associated with the entity; and determining the user value score based on aggregating the analysis for the at least one media content.

[0082] Example 6: The computer-implemented method of Example 5, wherein the plurality of value factors includes at least one of content originality, authenticity of entity, verifiability of entity, interactions with the audience of the entity, or category of entity.

[0083] Example 7: The computer-implemented method of any of Examples 1-6, wherein determining the consumption report comprises: categorizing the user based on one or more demographics; and determining the plurality of content factors for the user based on the categorization.

[0084] Example 8: The computer-implemented method of Example 7, wherein determining the consumption report further comprises: determining an amount of media content from the entity consumed by the user; and updating, for each factor of the plurality of content factors, a percentage of media content consumed by the user exhibiting the factor based on the determined amount of media content and the entity score.

[0085] Example 9: The computer-implemented method of any of Examples 1-8, wherein the user's interaction includes at least one of hovering over a link associated with the entity, viewing a media content associated with the entity, liking the media content, or liking the entity.

[0086] Example 10: The computer-implemented method of any of Examples 1-9, wherein presenting the consumption report comprises presenting a label including the entity score.

[0087] Example 11: A system comprising: at least one physical processor; physical memory comprising computer-executable instructions that, when executed by the physical processor, cause the physical processor to: detect a user's interaction with digital media content provided by an entity; determine an integrity score for the entity, wherein the integrity score is associated with a behavior of the entity; determine a user value score for the entity, wherein the user value score is associated with a behavior of an audience of the entity; calculate

an entity score for the entity based on the integrity score and the user value score; determine a consumption report for the user based on the entity score, wherein the consumption report indicates an amount of content consumed by the user during a time period for at least one of a plurality of content factors, and wherein the plurality of content factors is associated with the behavior of the entity and the behavior of the audience of the entity; and present the consumption report to the user.

[0088] Example 12: The system of Example 11, further comprising identifying a controlling entity of the entity, wherein determining the integrity score comprises determining an integrity score for the controlling entity, and determining the user value score comprises determining a user value score for the controlling entity.

[0089] Example 13: The system of any of Examples 11-12, wherein: determining the integrity score comprises: analyzing a plurality of integrity factors for at least one media content associated with the entity; and determining the integrity score based on aggregating the integrity factor analysis for the at least one media content; and determining the user value score comprises: analyzing a plurality of value factors for the at least one media content associated with the entity; and determining the user value score based on aggregating the value factor analysis for the at least one media content.

[0090] Example 14: The system of Example 13, wherein the plurality of integrity factors includes at least one of content originality, level of misinforming, level of scamming, level of spamming, level of ad farming, level of click baiting, quality of content, amount of misconduct, or level of impersonating.

[0091] Example 15: The system of any of Examples 13-14, wherein the plurality of value factors includes at least one of content originality, authenticity of entity, verifiability of entity, interactions with the audience of the entity, or category of entity.

[0092] Example 16: The system of any of Examples 11-15, wherein determining the consumption report comprises: categorizing the user based on one or more demographics; determining the plurality of content factors for the user based on the categorization; determining an amount of media content from the entity consumed by the user; and updating, for each factor of the plurality of content factors, a percentage of media content consumed by the user exhibiting the factor based on the determined amount of media content and the entity score.

[0093] Example 17: A non-transitory computer-readable medium comprising one or more computer-executable instructions that, when executed by at least one processor of a computing device, cause the computing device to: detect a user's interaction with digital media content provided by an entity; determine an integrity score for the entity, wherein the integrity score is associated with a behavior of the entity; determine a user value score for the entity, wherein the user value score is associated with a behavior of an audience of the entity; calculate an entity score for the entity based on the integrity score and the user value score; determine a consumption report for the user based on the entity score, wherein the consumption report indicates an amount of content consumed by the user during a time period for at least one of a plurality of content factors, and wherein the plurality of content factors is associated with the behavior of the entity and the behavior of the audience of the entity; and present the consumption report to the user.

[0094] Example 18: The non-transitory computer-readable medium of Example 17, wherein: determining the integrity score comprises: analyzing a plurality of integrity factors for at least one media content associated with the entity; and determining the integrity score based on aggregating the integrity factor analysis for the at least one media content; and determining the user value score comprises: analyzing a plurality of value factors for the at least one media content associated with the entity; and determining the user value score based on aggregating the value factor analysis for the at least one media content.

[0095] Example 19: The non-transitory computer-readable medium of Example 18, wherein the plurality of integrity factors includes at least one of content originality, level of misinforming, level of scamming, level of spamming, level of ad farming, level of click baiting, quality of content, amount of misconduct, or level of impersonating.

[0096] Example 20: The non-transitory computer-readable medium of any of Examples 18-19, wherein the plurality of value factors includes at least one of content originality, authenticity of entity, verifiability of entity, interactions with the audience of the entity, or category of entity.

[0097] As detailed above, the computing devices and systems described and/or illustrated herein broadly represent any type or form of computing device or system capable of executing computer-readable instructions, such as those contained within the modules described herein. In their most basic configuration, these computing device(s) may each include at least one memory device and at least one physical processor.

[0098] In some examples, the term “memory device” generally refers to any type or form of volatile or non-volatile storage device or medium capable of storing data and/or

computer-readable instructions. In one example, a memory device may store, load, and/or maintain one or more of the modules described herein. Examples of memory devices include, without limitation, Random Access Memory (RAM), Read Only Memory (ROM), flash memory, Hard Disk Drives (HDDs), Solid-State Drives (SSDs), optical disk drives, caches, variations or combinations of one or more of the same, or any other suitable storage memory.

[0099] In some examples, the term “physical processor” generally refers to any type or form of hardware-implemented processing unit capable of interpreting and/or executing computer-readable instructions. In one example, a physical processor may access and/or modify one or more modules stored in the above-described memory device. Examples of physical processors include, without limitation, microprocessors, microcontrollers, Central Processing Units (CPUs), Field-Programmable Gate Arrays (FPGAs) that implement softcore processors, Application-Specific Integrated Circuits (ASICs), portions of one or more of the same, variations or combinations of one or more of the same, or any other suitable physical processor.

[0100] Although illustrated as separate elements, the modules described and/or illustrated herein may represent portions of a single module or application. In addition, in certain embodiments one or more of these modules may represent one or more software applications or programs that, when executed by a computing device, may cause the computing device to perform one or more tasks. For example, one or more of the modules described and/or illustrated herein may represent modules stored and configured to run on one or more of the computing devices or systems described and/or illustrated herein. One or more of these modules may also represent all or portions of one or more special-purpose computers configured to perform one or more tasks.

[0101] In addition, one or more of the modules described herein may transform data, physical devices, and/or representations of physical devices from one form to another. For example, one or more of the modules recited herein may receive score value data to be transformed, transform the score value data, output a result of the transformation to present a consumption report, use the result of the transformation to update the consumption report, and store the result of the transformation to maintain the consumption report. Additionally or alternatively, one or more of the modules recited herein may transform a processor, volatile memory, non-volatile memory, and/or any other portion of a physical computing device from one form to another by executing on the computing device, storing data on the computing device, and/or otherwise interacting with the computing device.

[0102] In some embodiments, the term “computer-readable medium” generally refers to any form of device, carrier, or medium capable of storing or carrying computer-readable instructions. Examples of computer-readable media include, without limitation, transmission-type media, such as carrier waves, and non-transitory-type media, such as magnetic-storage media (e.g., hard disk drives, tape drives, and floppy disks), optical-storage media (e.g., Compact Disks (CDs), Digital Video Disks (DVDs), and BLU-RAY disks), electronic-storage media (e.g., solid-state drives and flash media), and other distribution systems.

[0103] The process parameters and sequence of the steps described and/or illustrated herein are given by way of example only and can be varied as desired. For example, while the steps illustrated and/or described herein may be shown or discussed in a particular order, these steps do not necessarily need to be performed in the order illustrated or discussed. The various exemplary methods described and/or illustrated herein may also omit one or more

of the steps described or illustrated herein or include additional steps in addition to those disclosed.

[0104] The preceding description has been provided to enable others skilled in the art to best utilize various aspects of the exemplary embodiments disclosed herein. This exemplary description is not intended to be exhaustive or to be limited to any precise form disclosed. Many modifications and variations are possible without departing from the spirit and scope of the present disclosure. The embodiments disclosed herein should be considered in all respects illustrative and not restrictive. Reference should be made to the appended claims and their equivalents in determining the scope of the present disclosure.

[0105] Unless otherwise noted, the terms “connected to” and “coupled to” (and their derivatives), as used in the specification and claims, are to be construed as permitting both direct and indirect (i.e., via other elements or components) connection. In addition, the terms “a” or “an,” as used in the specification and claims, are to be construed as meaning “at least one of.” Finally, for ease of use, the terms “including” and “having” (and their derivatives), as used in the specification and claims, are interchangeable with and have the same meaning as the word “comprising.”

ABSTRACT

Users consume a large amount of media content from various online sources, which may include established media sources as well as questionable sources. Users may not have many resources to aid in discerning between media content from legitimate sources and media content from questionable sources. Many users may have limited media literacy. To improve media literacy, a consumption report may present how much of the user's daily media content consumption applies to various content attributes such that the user may be better informed about how much trustworthy content he or she has consumed. The user's interaction with digital media content provided by an entity is detected and an integrity score and a user value score may be determined. The integrity score may be associated with a behavior of the entity and the user value score may be associated with a behavior of an audience of the entity. An entity score may be calculated based on the integrity and user value scores, and a consumption report may be determined based on the entity score. The consumption report may indicate an amount of content consumed by the user during a time period for at least one of a plurality of content factors which may be associated with the behavior of the entity and the behavior of the audience of the entity. The consumption report may be presented to the user near the digital media content.

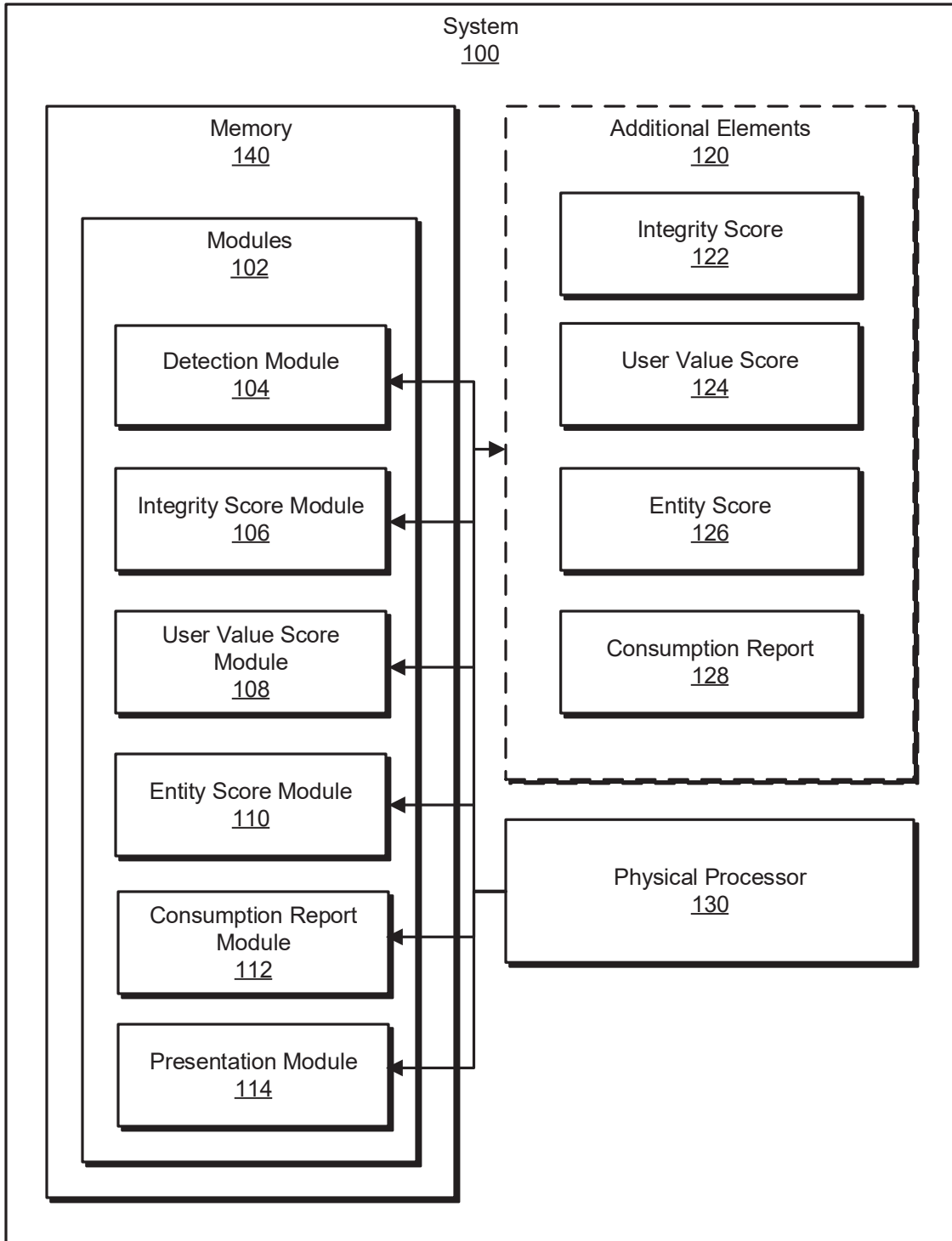


FIG. 1

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200

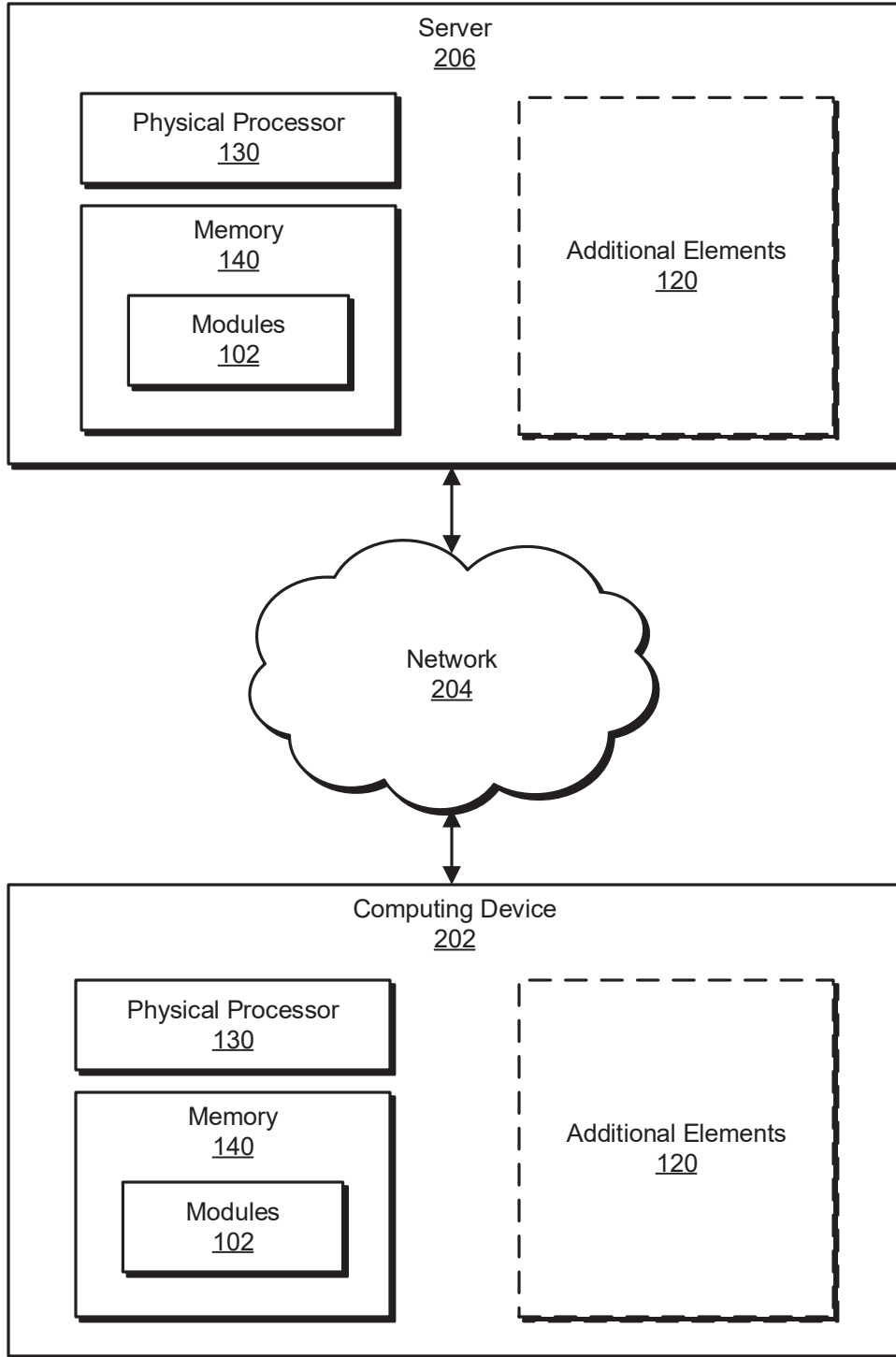


FIG. 2

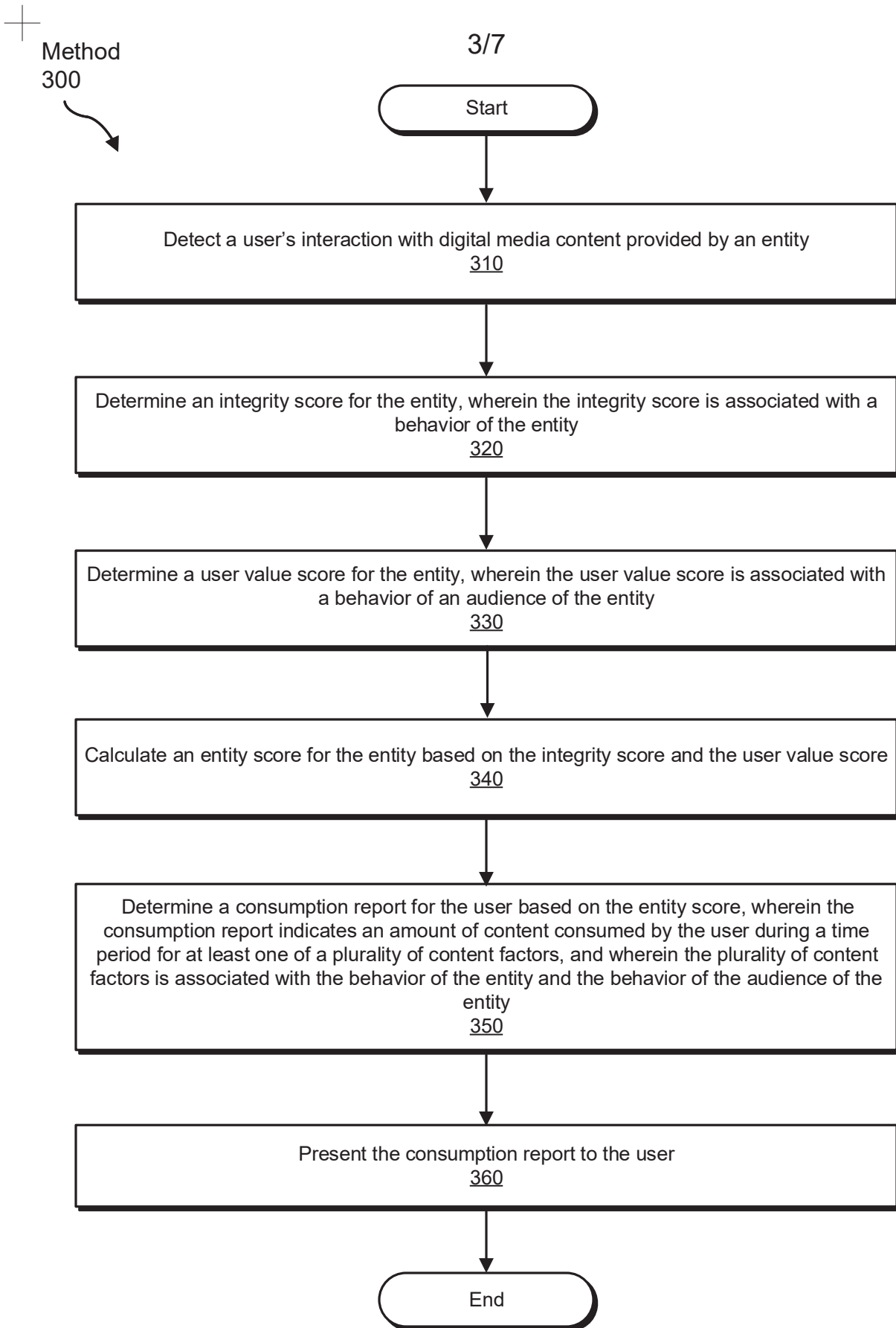


FIG. 3

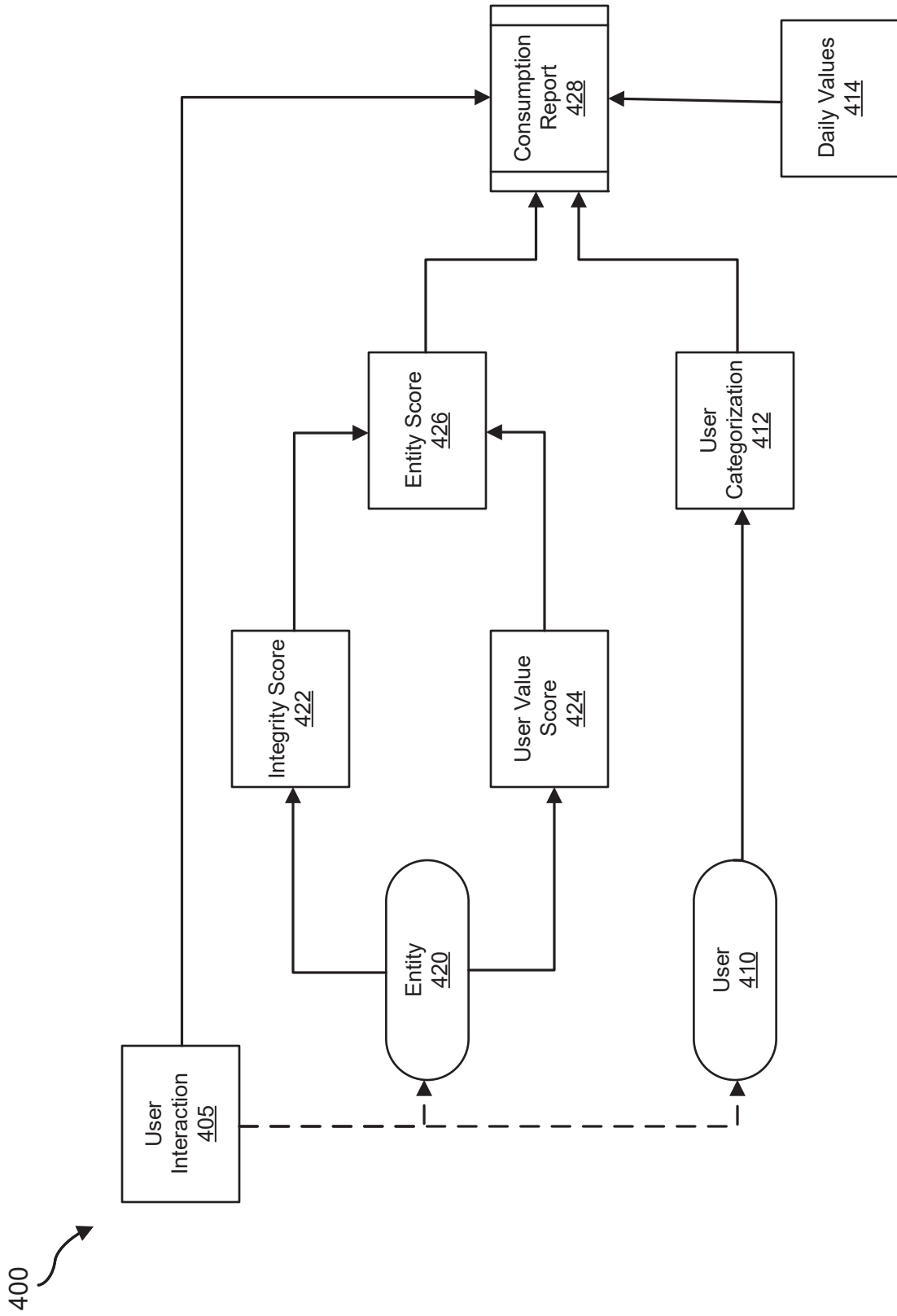


FIG. 4

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500



Integrity Factor	Value Range
Copied Content	1-5
Misinformation	1-5
Scam	1-5
Spam	1-5
Ad Farms	1-5
Click Bait	1-5
Content Quality	1-5
Repeat Offenders	1-5
Impersonation	1-5

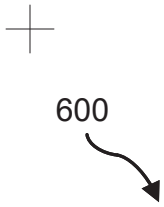
FIG. 5A

501



User Value Factor	Value Range
Originality	1-5
Authenticity	0 or 1
Verified	0 or 1
Verified attributes	0 or 1
Verifiable entity off-site	0 or 1
High # of transactions	1-5
High # of considerations	1-5
Page category	single value

FIG. 5B



Community Facts

10,822,266 Followers

Verified as Authentic

Community Value
Score 230

% Daily Value*

Total Low Quality Content	10 %
Misinformation	5%
Spam	20%
Scam	0%
Click Bait	7%
Community Strikes	13 %
Violence	14 %
Objectionable Content	
Hate Speech	20%

Original Content	10%
Authentic Source (Verified)	20%
Verified Contact Information	45%
High transaction volume	6%

*The % Daily Value tells you how much an attribute contributes to your daily media consumption diet.

Callout labels: 629 points to 'Verified as Authentic'; 626 points to 'Score 230'; 622 points to the 'Total Low Quality Content' table; 624 points to the bottom table; 628 points to the entire table area.

FIG. 6

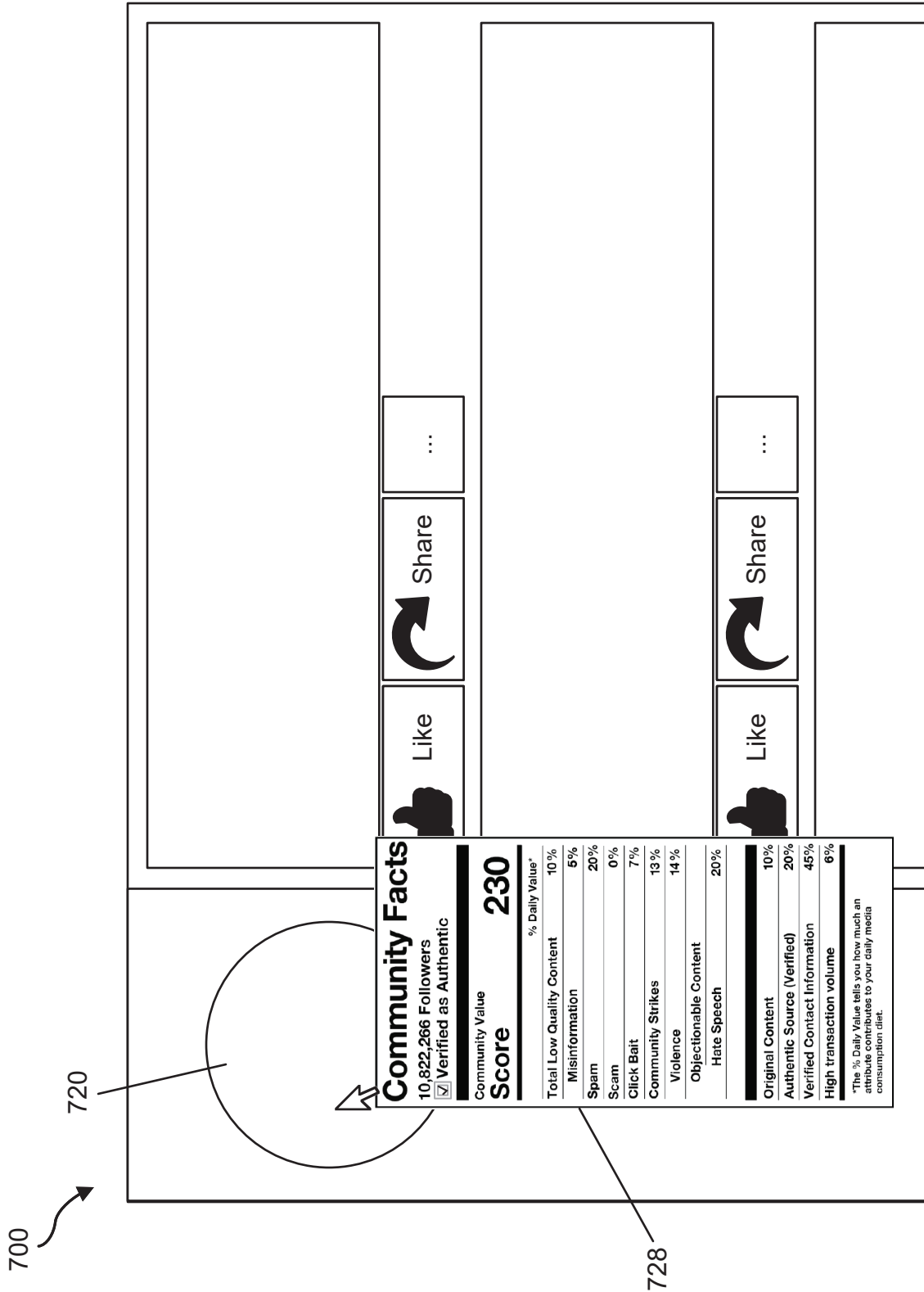


FIG. 7