Creation and implementation of artificial intelligence for testing group members on the social network Facebook in order to identify unscrupulous accounts

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ABSTRACT

Proof of the presence of group dynamics in a virtual closed group on the social network Facebook for the possibility of using artificial intelligence in the form of regular unchanging initial interrogation and analysis of group members' responses to identify unscrupulous accounts and social bots.

Keywords:artificial intelligence, closed group, unscrupulous account, social bot, fake account, group dynamics, virtual group.

1. INTRODUCTION

Nowadays, group processes on the Internet, namely on social networks, are mostly studied and described by technical specialists and marketers. Psychological studies that study the phenomenon of virtual groups and their life processes are episodic and affect a narrow area of their phenomenology, therefore they are rarely used in cybersecurity.

Using artificial intelligence to test group members on the social network Facebook, taking into account the psychological aspects, will help to facilitate and improve the procedure for identifying unscrupulous accounts and social bots invirtual groups.

2. RESEARCH

This research and implementation method is intended for closed groups in the social network Facebook. In a closed Facebook group, only people in this group can create their own posts, see the members of the group, view the posts of other members. To become a member, you need to send a request to the group administrator. To protect the group from social bots and unscrupulous accounts, most administrators use the function of adding a survey (questionnaire) with several questions to add new members to the group. Up-to-date, this method of protection is very popular, but not effective enough, since the answers in the questionnaires are most often short or monosyllabic (yes / no), so it is easy to pick them up for social bots, enemies and fake accounts.

From the side of psychology, R. Bales' definition states that a small group is "any number of people interacting with each other in the form of one direct meeting or a series of meetings, in which each member of the group receives some impression or perception of each other member ... ".

In 1984, George Lanier introduced the concept of "virtual reality". By his definition, virtual reality is an interactive imitation of realistic and fictional environments, a kind of illusory world into which a person immerses and interacts with, and this world is created by an imitation system that is capable of forming appropriate motives in the person's sensory field and perceiving his responses in the motor field in real time. The term "Virtual Reality", proposed in 1989, denoted an already artificial three-dimensional world - cyberspace created with the help of a computer and perceived by a person through special devices. But at the moment, there is still no exact scientific definition of the concept of a virtual group. However, various studies, one way or another, touch upon the topic of groups in virtual reality. This is how a "virtual team" is distinguished in virtual psychology. This is a group of such employees who work over the Internet. They rarely meet in person or do not know each other at all. Within the framework of this direction of psychology, based on the materials of virtual teams, certain rules were formulated and described to ensure the effectiveness of their work.

In the realities of the 21st century, by the psychological definition of a small group, slightly modifying it, it is possible to roughly define a virtual group: any number of persons interacting with each other in a closed virtual space, in which each member of the group receives some impression or perception of each other member, communicating through Internet and not knowing each other personally.

Group dynamics is an essential process in the small group. Group dynamics includes five basic elements: group goals, group norms, group structure and leadership, group cohesion, and phases of group development [1]. The group dynamics of a virtual group is determined by changes in the value orientations of the participants, their socio-psychological relations and statuses.

The analysis of scientific literature devoted to the study of virtual groups in the blogosphere showed that today there are no scientific psychological studies of the group dynamics of virtual groups in the blogosphere. However, research on earlier forms of group interaction such as forums and chat does exist. N. D. Chebotareva in her article "The Internet Forum as a Virtual Analogue of a Psychodynamic Group" [2] points to the following stages specific to a virtual group:

1. Entry of the participant into the discussion.

2. The beginning of self-disclosure on the part of the participant, giving "examples" from his own life under the pretext of discussing them from an ethological point of view. Commenting on the replicas of other discourses from the point of view of their own life experience through the prism of their own values and beliefs.

3. Mutual provocations of the participant who has just joined the forum and the "old-timers". "Clarification of relations" between those participants in the discussion, whose worldviews contain conflicting attitudes.

4. Presentation of deeper personal problems, an increase in sincerity.

The hypothesis of the presence of group dynamics in a virtual group allows us to state that when the initial survey is conducted regularly, the responses of real group members will change. At the same time, the responses of social bots and unscrupulous accounts that do not participate in the life of the group will not be subject to change.

Suchwise, using artificial intelligence in the form of a regular, unchanging primary survey and analysis of responses, it is possible to cleanse the virtual group of social bots and unscrupulous accounts.

3. CONCLUSION

In this article, a theoretical analysis of the research of a small group, its basic characteristics and dynamics were carried out. Analyzed scientific works devoted to the study of virtual groups. During the analysis, the main directions in the study of virtual groups were identified. The hypothesis that the group dynamics of a virtual group on the Internet exists and is determined by changes in the value orientations of users, their socio-psychological relations and their statuses, made it possible to argue that using artificial intelligence by conducting regular unchanging polls within virtual closed Facebook groups and analyzing the responses, it is possible to spot social bots, unscrupulous and fake accounts.

Analysis of the data obtained in the course of the study with further interpretation from the point of view of cybersecurity makes it possible to assert that the responses to surveys among real group members will change, and the responses of social bots and other unscrupulous group members will remain unchanged.

References

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