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IDENTIFICATION OF AGENT-GUILT USING DRIFTS CONCEPT IN PROCESS MINING

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Abstract: - Every business process that changes almost over the time change for different timings that have contemporary mining techniques involved in processing the analysis of steady state process. Process that suddenly changes may have gradual progress. The drift may be periodic which occurs due to seasonal influences that will have one-of-a-kind that a new legislation is affected. It is crucial to discover and understand such concept drifts in processes. A data distributor has given sensitive data to a set of supposedly trusted agents. A distributor should access the likelihood that the leaked data came from one or more agents. In this Paper, We propose data allocation strategies across the agents that improve the probability and then leakage is identified. These methods do not rely on alterations of the released data. Then inject "realistic but fake" data records to further improve our chances of detecting leakage and identifying the guilty party.

Keywords: Heuristic guilt agent analysis algorithm, agent-guilt detection.

1. Introduction

Authors Process mining techniques have got matured recently. Provided that the process is stable and enough example traces have been recorded and logged in the event, and it is possible to discover a high-quality process model that can be used for performance analysis, compliance checking, and prediction [1]. Unfortunately, most processes will be in every dynamic process that increases the necessity for enterprises that provide analysis towards their processes so as to reduce costs and to improve performance. Moreover, today's customers expect organizations to be flexible and adapt to changing circumstances [2]. New legislations created as many acts that have extreme variations in supply and demand that affects seasonally with natural calamities leads to disasters that are also forcing organizations to change their processes.

For example, governmental and insurance organizations reduce the fraction of cases being checked when there is too much work in the network of process. In case of any calamities or problems many government institutions change their operating procedures etc. It is evident that the economic success of an organization is more and more dependent on its ability to react and adapt to changes in its operating environment [3]. Concept drift refers to the situation in which the process is changing while being analyzed.

The need for techniques that deal with such second order dynamics analyzing such changes is of utmost importance when supporting or improving operational processes and to get an accurate insight on process executions at any instant of time. Processes can change in with respect to the three main process perspectives,

viz., Control flow, data, and resource. There are different changes that pursues drift process concept which gives behaviour with activity process. Such changes are perceived to induce a drift in the concept (process behaviour), e.g., in the way which activities are executed when, how, and by whom. There are three topics when dealing with concept drifts in process mining [4].

Whenever the data is transmitted from agent IP address, the heuristic algorithm is triggered and enabled in distributor side. Data transferred means that is indicated by the count value 1. There are many values that triggers display agents for unauthorized IP for different kinds of process points. Graph is displayed by agent IP address and unauthorized IP address with the notification of which data is transferred.

2. Change of Process Points

2.1 Change Point Detection

The first and most fundamental problem is to detect concept drift in processes that takes place for detection of process [5]. If so, the next step is to identifying the time periods at which changes occur. And also by analyzing an event log from an organization, one should be able to detect that process changes happen and that the changes happen at the onset of a season.

2.2 Change Localization and Characterization

Once a point of change has been charged, then it is applied to characterize the nature of change, and identify the region(s) of change (localization) in a process [6]. Uncovering the nature of change is a challenging problem that involves both the identification of change perspective (e.g., control-flow, resources which is sudden and gradual) identifies exact and change itself. In the seasonal process, there could be a change that more resources are deployed or that special offers are provided during holiday seasons.

2.3 Change Process Discovery

Having identified, localized, and characterized the changes, it is necessary to put all of these in perspective. The main need for techniques is that which exploit and relate these discoveries [7]. Unravelling the evolution of a process should result in the discovery of the change process describing the second dynamics. A seasonal process, one could identify that the process recurs every season. A process evolved over a period of time with annotations showing several perspectives such as the performance metrics of process at different instances of time.

One can consider an event log L as a time series of traces (traces ordered based on the timestamp of the first event). The basic premise in handling concept drifts is that the characteristics of the traces before the change point differ from the characteristics of the traces after the change point. The problem of change (point) detection is then to identify the points in time when the process has changed, if any. Change point detection involves two primary steps:

- (i) Capturing the characteristics traces, and
- (ii) Identifying when these characteristics change.

The process is stable and enough example traces have been recovering and is possible to discover a high quality process model that can be used for analyzing the performance, checking, and predicting. Fairly most processes are not in steady-state [8]. In today's dynamic place which is increasingly necessary for enterprises to streamline their processes so as to reduce costs and to improve performance. We consider applications where the original sensitive data cannot be perturbed and analyzed. A completely specified workflow design is required in order to enact a given workflow process. The design for creation of workflow which is very complicate process that consumes more time for typical process that have more discrepancies between flow of workflow processes that follows the management. Thus the proposed techniques that rediscover the workflow models for distributed design. This technique uses workflow logs to discover the workflow process as it is actually being executed.. If that copy is later discovered in the hands of an unauthorized party, the leaker can be identified [9]. Watermarks can be very useful involve some modification of the original data. Other watermarks cause malicious code.

3. Assimilation of Guilt Agent

In our proposed system we use four featured controls that categorize the flow of dependencies using activity for their characteristics. These features are shown to be effective in detecting process changes [10]. After providing different set of objects to agents there are some discovery of distributors from those same objects in an unauthorized place. Thus the distributor will have no point in assessment of meaningfulness along with the leaked data that comes from more than one or two agents. As they have oppositions that gather information independently by some other means of distributed data. If the distributor sees “enough evidence” that a particular agent only leaked the data, he may stop doing business with him, or may initiate legal proceedings. This Project is developed to identify the guilt of agents. There is also algorithm that distributes objects for improving the chance of identifying the leaker probabilities. The option that has consideration for the fake identification of objects in the distributed set will be the real entities will not have any correspondence with third parties in place. If it turns out an agent was given one or more fake objects that leaks the confidence of the distributor where that agent is guilty of fake objects.

We present algorithms for distributing objects to agents, which improves our chances of identifying a leaker. If it turns out an agent was given one or more fake objects are leaked, then the distributor will be more confident that agent was guilty and their objectives are distributor can have the “enough evidence” to hack the malpractices authorized agent.

4. Heuristic Guilt Agent Analysis

Heuristic is a term derived for algorithms which find solutions among all possible they do not guarantee that the best are done. They are algorithms which can be considered approximately but not accurate. Finding a solution for the algorithm which is close to the best one and finding it fast. The algorithm undergoes an illegal action which is used to find authorized guilt agent. Configurable method is used in login/registration to a particular IP address. Matching IP address which is specified using Heuristic guilt agent analysis algorithm and also used to analyze changes in original data. The algorithm also used random number of fake objects when the authorized agent tries sending data to unauthorized agent. This can solve problems easily,

$$f(n) = g(n) + h(n)$$

$$h(n) < h^*(n) \text{ for all states } n$$

$$h(n) = \text{true minimal cost to goal from } n.$$

$$f(n) \text{ estimate cost of best solution through } n$$

$$f(n) = g(n) + h(n)$$



login page is provided which is mainly used to provide authority to a user by accessing and providing the authority and also accessing other modules of the project. After completion secondly data transfer, is mainly designed to transfer data from distributor to agents. Then the module is used for illegal data transfer from authorized to agents to other agents. Fake agents are then discovered increment of transfer of data is handled. Probability distribution of data which is leaked by fake agents is diminished.

4.1 Identification of Drift Flow

The first and most fundamental problem for detecting the drift concept of processes that changes the detection process that leads to concept of drift in process that has taken place. There are many steps that identifies the next step for different time periods where the changes taken place that analyzing an event log from an organization, one should be able to detect that process changes happen and that the changes happen at the onset of a season. This module is mainly designed for transferring data with agents that is with distributed agents. The illegal data transfer for same modules that has authorized to agents to other agents. Login is a process in this it

mainly designed to provide the authority to a user in order to access the other modules of the distributed process where a user can have the access towards authority after the registration. Change point detection module: The first and most fundamental problem is to detect concept drift in process that can detect that a process where the change taken place. For next step identification for various time periods that takes place changes together. For analyzing an event log from an organization, one should be able to detect that process changes happen and that the changes happen at the onset of a season. The heuristic algorithm triggers on the fake object activation and authorization data sent to a unauthorized agent. Then original data send to the IP address. Then by using check valid IP address locking other system by accessing. After that the distributor server sends evidence information to the distributor.

The server finds the guilt agent then the distributors distributes. Implementation is the stage of the project when the theoretical design is turns the system of working in various aspects. The achievement for considering the critical stage of new systems that can be successfully given by the user for confidence of systems that will work effectively. Through triggering the server enters the database which could be effectively approached.

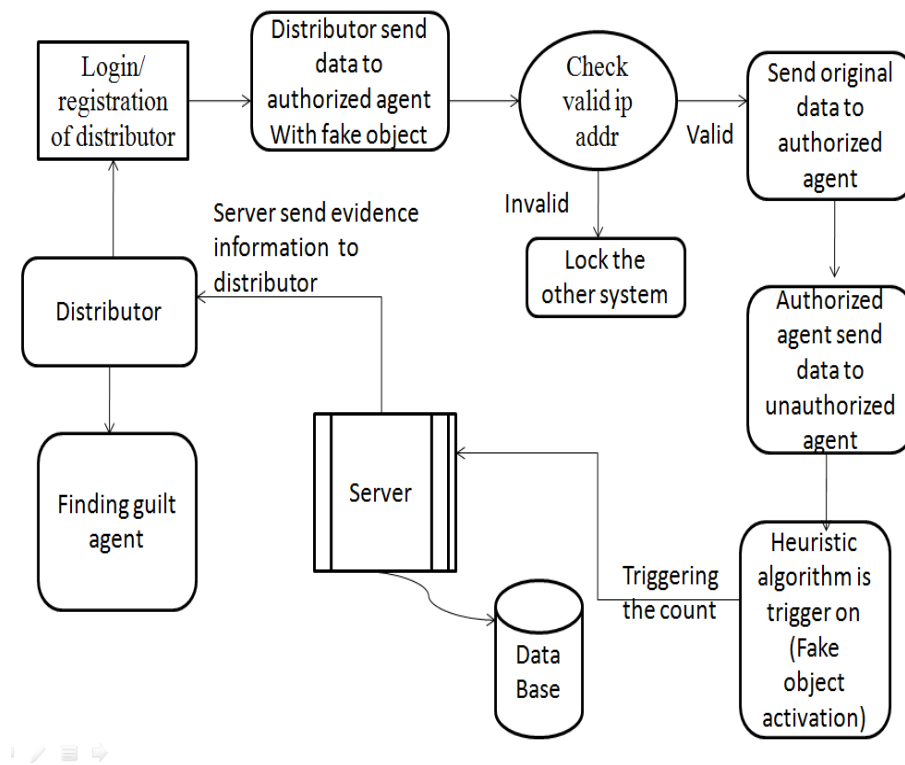


Figure.1. Heuristic algorithm architecture

The coding step translates a detail design representation into a programming language realization. Programming languages are vehicles for communication between human and computers programming language characteristics and coding style can profoundly affect software quality and maintainability. The coding is done with the following characteristics in mind.

- Ease of design to code translation.
- Code efficiency.
- Memory efficiency.
- Maintainability.

5. Conclusion

We analyzed event logs of three processes from a large Dutch municipality for the presence of concept drifts that leads to process changes. The detection of such change points can help us put the results of process mining in a right perspective and enables an organization to take appropriate measures when a change in behaviour is perceived. Using the framework proposed in for dealing with concept drifts in process mining, we are able to detect changes in real-life event logs even with a small number of cases. We have considered changes only with respect to the control-flow perspective manifested as sudden and gradual drifts. Therefore, our analysis should only be observed as the starting point for a new subfield in the process mining domain. Hence, six features characterizing flow of dependent activities.

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