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JAKARTA RAYA
FAKULTAS EKONOMI

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Tentang

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FAKULTAS EKONOMI DAN BISNIS UNIVERSITAS BHAYANGKARA JAKARTA RAYA

Pertimbangan : Sehubungan dengan Penugasan dosen Sebagai Penulis dan Pembicara Prosiding yang dilakukan Dosen Fakultas Ekonomi dan Bisnis Universitas Bhayangkara Jakarta Raya semester Ganjil TA.2020/2021. Dipandang perlu menugasan Dosen Tetap Fakultas Ekonomi dan Bisnis untuk melaksanakan kegiatan yang dimaksud. Untuk itu perlu mengeluarkan Surat Tugas.

Dasar : a. UU RI No.12 Tehun 2012 tanggal 10 Agustus 2012 tentang Pendidikan Tinggi.

b. Keputusan Kepala Kepolisian Republik Indonesia selaku Ketua Umum Yayasan Brata Bhakti Polri No. Pol : KEP/05/IX/1995/YBB tanggal 18 September 1995 tentang Pembentukan dan Pendirian Universitas Bhayangkara Jakarta Raya.

c. Surat Keputusan Rektor Nomor: SKep/086/VIII/2019/UBJ tanggal 02 Agustus 2019 tentang Pemberhentian dari dan Pengangkatan dalam Jabatan di Lingkungan Universitas Bhayangkara Jakarta Raya.

d. Surat Keputusan Rektor Ubhara Jaya Nomor: SKep/107/VIII/2020/UBJ tanggal 31 Agustus 2020 tentang Kalender Akademik Semester Ganjil dan Genap TA. 2020/2021

DI TUGASKAN

Kepada : 1. Nama : Aloysius Harry Mukti MS.Ak.,PhD
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2. Nama : Triana Yunita, S.E.,M.M.,Ak.,CA.,M.Ak.
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LAMPIRAN SURAT PENUGASAN DEKAN FAKULTAS
EKONOMI DAN BISNIS
NOMOR   : ST/018/II/2021/FE-UBJ
TANGGAL : 20 Februari 2021

Untuk   : 1. Melaksanakan tugas sebagai Penulis dan Pembicara Pada Prosiding
Converence on Management, Business, Innovation, Education and
Social Sciences dengan Judul *"How Accounting Artificial
Intelligence Can Prevebt Fraud? (Status and Research
Opportunities)"* tanggal 24 Februari 2021 di Universitas
Internasional Batam.

2. Melaporkan hasil pelaksanaan kegiatan tersebut secara tertulis
kepada Dekan Fakultas Ekonomi.

3. Melaksanakan tugas ini dengan penuh tanggung jawab.

Pada Tanggal   25   Februari 2021
DEKAN FAKULTAS EKONOMI DAN BISNIS

Dr. Istianingsih Sastrodiharjo. CA., CSRA., CMA., CACP
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Tembusan:
1.Arsip

How Accounting Artificial Intelligence Can Prevent Fraud ? (Status and Research Opportunities)

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Abstract

The implementation of information technology is crucial as a fraud prevention mechanism, the industrial revolution has triggered the optimization of information technology that increasingly resembles humans or what we call artificial intelligence. Human has limitations in the capacity of data storage and analysis of decision making. The purpose of this study was to provide a description of the results of research related to artificial intelligence and the role of artificial intelligence in preventing fraud. The research method of this research is qualitative by conducting a literature review based on the results of previous studies without any classification criteria for journal sources. The results showed that the majority of research in this study still used a qualitative approach and literature reviews, it was rare that research conducted in-depth analysis or detailed case studies related to the implementation of artificial intelligence. The results also show that the application of artificial intelligence has never classified whether the artificial intelligence that has been implemented is weak or sophisticated artificial intelligence.

Keywords: Accounting Artificial Intelligence, Fraud

Introduction

Fraud committed by the company and its recurring nature can affect the internal and external of the company, one of the perceived impacts is the loss of trust from investors and corporate stakeholders (Kamarudin et al, 2012). Implementation of information technology is one mechanism for companies to be able to reduce the potential for fraud by accounting books that are more efficient, integrated and connect in real time between one entity with another. (Siddiqui & Ahmad, 2014).
Artificial intelligence can be used as a means of detecting and preventing fraud in the accounting process and financial statements. Some forms of artificial intelligence that are implemented are: 1. Artificial neural network (ANN), namely the performance of artificial nerves that aims to be able to do the process of imitation of the work of the human brain. 2. Multilayer Perception Algorithm (MPL), namely the performance of

artificial nerves as a form of prediction to identify and classify breakthroughs in the company's system. (Sadgali, 2019).

In the context of Indonesia in 2018 the Ministry of Finance through the Financial Professional Development Center gave sanctions to the Public Accounting Firm (KAP) Satrio Bing, Eny and Partners (Deloitte Indonesia) for SNP Finance audits by finding violations of audit procedures by the KAP, the weak control of the information system became the safer which results in inadequate financial data for the audit process. http://www.pppk.kemenkeu.go.id/News/Details/2135. This phenomenon indicates the urgency of optimizing information technology from various institutions, namely companies and public accounting firms as the main tools to minimize conflicts of interest and human error.

The significance of this study is to provide a description of the results of research on the implementation of accounting artificial intelligence in preventing fraud, the industrial revolution 4.0 encourages the optimization of information technology as the main tool because humans have limitations in data storage capacity and perform analysis with a combination of data stored for a period of time. certain. Previous research related to specific accounting artificial intelligence is also rarely conducted (Rikhardsson & Yigitbasioglu, 2018).

Research problem
How is the development of research on accounting artificial intelligence in preventing fraud ?

Research objective
to find out and describe the results of research on the implementation of accounting artificial intelligence in preventing fraud

Literature Review

Fraud Triangle Theory
A person's motivation for cheating consists of several causes, based on research conducted by Cressey (1953) in Mansor (2015), consist of:
a. Perceived Pressure
Any pressure felt by humans has the potential for unethical behavior, both financial and non-financial pressures. Fraud in the form of financial debt and financial losses, pressure also comes from the influence when someone is in a group to achieve performance that may be unrealistic (Albrecht, 2014).
Situational pressures can be grouped into two namely: (1). Someone who is cheating from a personal impulse to side with the company in the form of financial predictions, profits or cash flow shortages. (2). Someone who is cheating to fight the company.
b. Opportunity (Perceived Opportunity)
Opportunities come from weak internal control or corporate governance systems that ultimately provide an opportunity for someone to commit organizational fraud (Mansor, 2015). Similar research results show that the opportunity comes from the company's indifference to the company's internal control, for example someone can

commit fraud by studying the details of the company's operational system and modifying the information system used by the company (Albrecht, 2014).

c. Rationalization

This concept indicates that the perpetrators of fraud are aware of their behavior and consciously accept fraud as something that is morally acceptable (Mansor, 2015). Rationalization is an important component before fraud occurs, because rationalization motivates a fraud to occur. (Sujeewa, et al, 2018)

Theory of Convenience

Convenience is defined as taking the easiest way to achieve goals, this concept seeks to achieve goals with a short time, minimal effort and with the least amount of distress (Mai & Olsen, 2016) in Gottschalk (2018). Three factors in this theory are: (1). Economic motives (2). Opportunities in organizations and (3). The will of yourself. (Gotschalk, 2018).

Fraudulent

Fraud can be defined as giving information that is not appropriate, not appropriate can be described as the behavior of not providing information to third parties for information that should be disclosed, this will be caused by one party abusing the function that should provide protection and not taking sides for the interests of certain parties (Petrascu & Tieanu, 2014).

Accounting Artificial Intelligence

At present accounting intelligence is applied in all aspects of accounting operations, which causes concern about the sustainability of the accounting profession within the company. (Chukwudi, 2018). Furthermore, the easiest application of artificial intelligence is when computer applications are able to take over tasks that are normally done manually by humans. The development of artificial intelligence will increase in line with the complexity of human work and this is why the evolution of artificial intelligence will continue to develop in the future. (Chukwudi, 2018).

One form of artificial intelligence is business intelligence and analytics (BI&A) technology which functions to obtain data, conduct analysis and send information as a source of decision making (Rikhardsson & Yigitbasioglu, 2018). From an audit perspective, the implementation of artificial intelligence includes the format developed by Pricewaterhouse Coopers (PwC), namely risk control workbench and Deloitte's Visual Assurance. (Omoteso, 2012).

Research Methods

Research Types and Design

This type of research is a qualitative descriptive study, with the aim to get an idea of the application of accounting artificial intelligence in minimizing the potential for accounting fraud (Rahmat, 2009). Literature reviews are conducted with two main focuses, namely the implementation of accounting artificial intelligence and the implementation of accounting artificial intelligence to prevent fraud (Rikhardsson & Yigitbasioglu, 2018).

Data Sources

Data sources is secondary that obtained from data collection techniques that support primary data, namely books and other supporting documents obtained from previous research. Literature review is based on scientific journals without performing certain classifications or criteria in selecting the journals. Period of research journal collecting is one month from several sources such as research gate and elsivier

Result and Discussion

As a significant effect on the performance of accounting function of accounting firms in South East Nigeria. It was concluded that, the application of artificial intelligence positively influences the performance of accounting functions. Chukwudi, Echefu, Boniface, & Victoria, 2018). Framework for evaluating expert system work (consist of KA or knowledge acquisition, KV or knowledge validation and KR or knowledge representation (Meservy, Denna, & Hansen, 1992). Undoubtedly, intelligent finance and accounting is the future development trend. In the process of promoting the application of artificial intelligence in the accounting field, it is necessary for the country, enterprises, universities, individuals and other parties to work together, and how to effectively solve the problems arising in the process of application will be the key. (Luo, Meng, & Cai, 2018)

The work reported in this paper illustrates one way in which artificial intelligence (AI) can be used to help students learn accounting. By providing the opportunity for step-by-step instruction as students learn to account for business transactions, the AI based transaction analysis tutor helps to establish a solid foundation in an important topic germane to most business school students. (Johnson, Philips & Chase, 2009). This platform is a completely distributed middleware system with a flexible infrastructure that allows extension with addons modules. JADE facilitates the development of complete agent– based applications and because it is written in Java language, it benefits from the huge set of programming abstractions allowing constructing JADE multi agent systems with minimal expertise in multi agent theory.(Adrian, 2008)

We have successfully built an accounting neural network that will predict future net sales values. The results we obtained are considered good, because our system is able to predict, with an acceptable error tolerance, which it should be company's monthly net sales value, based on the patterns this indicator evolved on the past (Florin, 2008). Artificial intelligence allows the user the ability to solve various problems, while allowing the user the ability to perform more work. The comparison of taxation and Auditing AI systems indicates that audit systems seem to allow for greater control over search. Taxation seems to allow more work to be done without supervision, make more decisions immediately, and allow the user to make a more decisions (Anzar, 2016).

Artificial intelligence has applications in divergent arenas. It enhances the tasks, makes it smarter, efficient as well as error free. Massive volumes can be emphatically processed. Auditing, for instance, can be 100% processed by a machine and there will not be any need to open different cabinets etc. AI empowered machines have the

tendency to forecast data, assess the existing patterns and adjudge the investment patterns. It also enables to verify employee profile across public database, in order to check against any criminal record. Credit risk assessment, fraudulent detection, price foretelling etc. artificially intelligent machines have its existence in differing fields Reepu, 2020).

our approach proposed the overall process of detecting financial fraud based on machine learning and compared with artificial neural networks approach to detect fraud and process large amounts of financial data. To detect financial fraud and process large amounts of financial data, our proposed process includes feature selection, sampling, and applying supervised and unsupervised algorithms. The final model was validated by the actual financial transaction data occurring in Korea, 2015. (Choi & Lee, 2018). The management of risk is crucial for the success of banks and for the stability of the financial system. There is little doubt that beyond the major cost reduction impacts of using AI in banking. Banks such as HSBC (2018) and Barclays (Noonan, 2018) have committed to developing the potential of AI in their risk management functions (Swankie & Broby, 2019).

accounting database systems had been criticized for the following. 1. not meeting the needs of decision makers;   2. having so much information that humans could not process or understand what was in the accounting database;   3. focusing on numeric data4. not understanding or interpreting events 5. difficult to use . AI, Expert system and natural language in accounting database system found that some of those limitation had been addresses (O'Leary, 1991).

Conclusions

1. Current status of accounting artificial intelligence research is based on literature reviews, the majority of which use a qualitative approach with a literature review, there are still few studies with a case study approach to the implementation of accounting artificial intelligence which is carried out for one research object.
2. Existing research on artificial intelligence still focuses on artificial intelligence information systems in general, there are very few studies that discuss artificial intelligence information systems for accounting.
3. Existing artificial intelligence research does not categorize whether the implementation of artificial intelligence falls into the category of narrow artificial intelligence, general artificial intelligence or artificial superintelligence so it is difficult to determine how strong the implementation of the implementation is in a research object.

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