AIBAI: AI in Business Applications and Industries Special Track running alongside BUSTECH 2023, The Thirteenth International Conference on Business Intelligence and Technology, June 26, 2023 to June 30, 2023 - Nice, Saint-Laurent-du-Var, France

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***Abstract*—Artificial intelligence has a wide range of uses in businesses, and in industry in general. Business process solutions with AI capabilities offer unprecedented capabilities and results. And with Digital Transformation and Automation of Business Processes, the industrial revolution, is an ongoing process that is continuously improving. It needs to be analyzed and evaluated.**

In this context, we propose this special track to focus on exploring the ways in which artificial intelligence can be used to improve business operations, decision-making, and customer experiences, but also to explore the intersection of IA and ethical considerations/implications in a business context. This track would cover the use of AI to analyze large datasets and identify patterns and trends that can inform business decisions. It might include discussions of machine learning algorithms, predictive modeling, and natural language processing that can applied to workflows or business processes .

***Index Terms*—Artificial Intelligence, industry, business processes**

I. Introduction

Artificial Intelligence (AI) has revolutionized the business landscape, empowering organizations across various industries to enhance efficiency, gain insights, and deliver personalized experiences. AI refers to the development of intelligent machines that can perform tasks requiring human intelligence, such as speech recognition, decision-making, problem-solving, and learning. In business applications, AI is being deployed to automate processes, analyze vast amounts of data, and enable predictive capabilities, ultimately driving growth and competitive advantage.

AI has found widespread adoption in several industries. In this context, we propose this special track to focus on exploring the ways in which artificial intelligence can be used to improve business operations, decision-making, and customer experiences, but also to explore the intersection of IA and ethical considerations/implications in a business context. The scope of our special track will not be restricted to any specific domain but will be relevant to a range of sectors for which we can have some potential specificities related to strategic decisions.

Some possible topics that might be covered in such a track could include:

A. Industry-specific applications

This issue would explore the ways in which AI can be applied to specific industries, such as healthcare, finance, or retail. It might include case studies and examples of successful AI implementations in these fields, as well as challenges and limitations to AI adoption.

B. Modeling, Automation, and Optimization

This topic would cover the use of AI to automate repetitive or time-consuming tasks, such as data entry or customer service inquiries. It might also explore ways in which AI can optimize business processes, such as supply chain management or inventory control.

C. Customer experience

This topic would focus on the ways in which AI can be used to enhance the customer experience, such as through personalized recommendations, chatbots, or voice assistants. It might also address concerns around privacy and ethical considerations in the use of AI for customer interactions.

D. Trust and transparency:

This topic would explore the importance of trust and transparency in the use of AI, particularly when it comes to sensitive business applications such as fraud detection or risk management. It might include discussions of explainability, accountability, and bias mitigation strategies.

E. Privacy and protection:

This topic would address the legal and ethical considerations surrounding the use of AI algorithms in collecting, processing, and storing data. It might cover both Data or flow dimensions. As example, we can cite topics such as business processes abstraction or modeling, that ensure the privacy inside organizations' workflows or Datasets.

F. Discovery and improvement

This topic would focus on the ways in some approaches can be used to enhance AI-based solutions in a business context. It might address concerns around the potential vulnerabilities and risks associated with using AI and process mining for example together, as well as the opportunities for improving business operations.

II. Submissions

In their paper: "Blockchain For Optimized Digital Identity (DIDOs)" [1], authors are interested on exploring new applications and revolutionary problem-solving approaches which involves blockchain technologies. The widespread adoption of blockchain has transformed our perception of data and trust, reshaping their relationship. In this work, authors embark on a series of works aimed at constructing a robust data trust framework, known as the Data Trust Protocol, anchored on decentralized identity (DID) principles. Within this article, they delve into the intricate realm of DID, proposing an implementation aligned with the esteemed W3C specification. Furthermore, they share their visionary outlook for the future of data trust that thrives atop a solid DID foundation, while addressing pertinent questions surrounding its realization.

The paper named "Supervised Classification with Deep Graph CNN" [2], tackle Convolution neural networks (CNNs) which have performed remarkably well in recent decades and become essential for classification tasks based on images or voice. They address some of their limitations in terms of generalization and examine some well-known CNNs architectures that try to create hierarchical structures based on graph databases. The contribution of this work is to present a structure where the convolution blocks are distributed in nodes, the relations between each node being articulated using a data partitioner. This exponentially multiplies the number of models depending on the depth of the graph and the number of partitions, but it keeps track of the hierarchical relationships between each node.

The final contribution "BeeKnote: Voice Chatbot Assistant for the Beekeepers" [3] is an another example of the use of Artificial Intelligence technologies in a specific domain as the agriculture and in particular on the beekeeping. In fact, due to the different encountered challenges by the beekeepers on their work, the need for chatbots to assist them was clearly expressed in many surveys. Chatbots assistants become very popular lately due to their unique characteristics in improving human computer communication thanks to the Natural Language techniques to process and understand natural human language, and this makes the chatbots assistants show a positive impact in enhancing the user experience for the customers and increasing the business profit for the stakeholders in almost every field, including the beekeeping. In this paper, firstly, a state of the art is presented about existing solutions as chatbot assistants in the agriculture and beekeeping field before presenting "BeeKnote". the proposed chatbot assistant aims to assist the beekeepers in their work by extracting relevant information from the vocal commands. The "BeeKnote" specificity is in their flexible architecture that addresses the limitations of the related work and provides a new approach to assist the beekeepers by offering them a hands-free experience.

III. Conclusion

The AIBAI (AI in Business Applications and Industries) special track includes a broad range of topics related to the use of AI in different industries. It is not restricted to any specific domain but it concerns sectors for which we can have some potential specificities related to strategic decisions. It contains both, academic research papers as well as studies from industry introducing interesting ideas for future work in this thriving research domain.

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References

[1] A. E. akroudi and R. JAziri, "Blockchain for optimized digital identity (didos)," in *The Thirteenth International Conference on Business Intelligence and Technology BUSTECH 2023*, IARIA, 2023.

[2] M. Tiberghien and R. JAziri, "Supervised classification with deep graph cnn," in *The Thirteenth International Conference on Business Intelligence and Technology BUSTECH 2023*, IARIA, 2023.

[3] M. S. Ahmed and al, "Beeknote: Voice chatbot assistant for the beekeepers," in *The Thirteenth International Conference on Business Intelligence and Technology BUSTECH 2023*, IARIA, 2023.