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Análisis y revisión documental de los algoritmos de IA en el AIoT: Una breve revisión

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RESUMEN

El artículo aborda la problemática principal de la convergencia entre Internet de las cosas (IoT) y la Inteligencia Artificial de las cosas (AIoT) y cómo estas tecnologías pueden colaborar para mejorar la eficiencia, la seguridad y la calidad de vida en diversos sectores. Su objetivo principal es analizar las teorías y metodologías relacionadas con la convergencia de IoT y AIoT, al mismo tiempo que se exploran las oportunidades y desafíos que surgen de esta combinación.

Para lograr este objetivo, se emplea una metodología basada principalmente en una revisión bibliográfica exhaustiva de la literatura académica relacionada con IoT, IA y AIoT. Se llevaron a cabo búsquedas avanzadas en bases de datos reconocidas, como IEEE y Google Acholar, con el fin de identificar bibliografía relevante que proporcionara información amplia y actualizada sobre cada uno de estos términos. Además, se examinaron minuciosamente las concepciones, definiciones y enfoques de los diferentes autores que trataban el tema en cuestión. Se prestó especial atención a los resúmenes, las introducciones y las conclusiones de los trabajos seleccionados para obtener una visión general de los temas tratados.

El artículo presenta una revisión bibliográfica que destaca la convergencia entre IoT y AIoT y cómo estas tecnologías pueden ser utilizadas en conjunto para mejorar la eficiencia, la seguridad y la calidad de vida en diversos sectores. Se identificaron las áreas de aplicación más significativas de IoT y AIoT, y se evaluaron los desafíos y oportunidades que surgen de esta convergencia. Los resultados obtenidos proporcionan una visión clara de cómo la combinación de IoT y AIoT puede transformar aspectos clave de la vida cotidiana y la industria.

Las conclusiones del artículo subrayan la importancia de la convergencia de IoT y AIoT, resaltando su potencial para transformar muchos aspectos de la vida cotidiana y la industria. La sinergia entre estas tecnologías puede impulsar soluciones creativas y mejorar la eficiencia en áreas como la salud, la movilidad, la energía y la gestión de ciudades inteligentes, entre otros sectores. Además, se plantean desafíos que deben abordarse, como la privacidad y la seguridad de los datos, la interoperabilidad de los dispositivos y los modelos de negocio sostenibles. Se proporciona una visión integral de la convergencia entre IoT y AIoT, basada en una revisión bibliográfica exhaustiva. Se destacan las áreas de aplicación más relevantes y se evalúan los desafíos y oportunidades que surgen de esta convergencia. Estos hallazgos contribuyen a la comprensión de cómo la combinación de estas tecnologías puede mejorar la eficiencia, la seguridad y la calidad de vida en diversos sectores, y enfatizan su potencial transformador en la vida cotidiana y la industria.

Palabras clave: IoT, AI, IoMT.

ABSTRACT

The article addresses the main issue of the convergence between the Internet of Things (IoT) and Artificial Intelligence of Things (AIoT) and how these technologies can collaborate to improve efficiency, safety and quality of life in various sectors. Its main objective is to analyze the theories and methodologies related to the convergence of IoT and AIoT, while exploring the opportunities and challenges arising from this combination.

To achieve this objective, a methodology based primarily on a comprehensive literature review of the academic literature related to IoT, AI and AIoT is employed. Advanced searches were conducted in recognized databases, such as IEEE and Google Scholar, in order to identify relevant literature providing comprehensive and up-to-date information on each of these terms. In addition, the conceptions, definitions and approaches of the different authors dealing with the topic in question were thoroughly examined. Special attention was paid to the abstracts, introductions and conclusions of the selected works in order to obtain an overview of the topics covered.

The article presents a literature review highlighting the convergence between IoT and AIoTand how these technologies can be used together to improve efficiency, safety and quality of life in various sectors. The most significant application areas of IoT and AIoT were identified, and the challenges and opportunities arising from this convergence were assessed. The results obtained provide a clear picture of how the combination of IoT and AIoT can transform key aspects of everyday life and industry.

The article's conclusions underline the importance of the convergence of IoT and AIoT, highlighting their potential to transform many aspects of everyday life and industry. The synergy between these technologies can drive creative solutions and improve efficiency in areas such as healthcare, mobility, energy and smart city management, among other sectors. In addition, there are challenges that need to be addressed, such as data privacy and security, device interoperability and sustainable business models. A comprehensive view of the convergence between IoT and AIoT is provided, based on a comprehensive literature review. The most relevant application areas are highlighted and the challenges and opportunities arising from this convergence are assessed. These findings contribute to the understanding of how the combination of these technologies can improve efficiency, safety and quality of life in various sectors, and emphasize their transformative potential in everyday life and industry.

KeyWords: IoT, AI, IoMT.

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