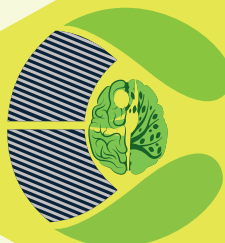


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Integration of Artificial Intelligence (AI) and Internet of Things (IOT)

– Mamidi Kalpana

Mtech (EEE), G.Narayanamma Institute of Technology and Sciences (for women)

 <https://orcid.org/0000-0002-6886-1881>

 mamidikalpana18@gmail.com

Artificial intelligence is a software which makes a machine/computer functions like the human mind. It has several programming applications that can perform a task which in general requires human intelligence. Some of the features like speech-recognition, translations, visual-perception, decision-making etc., are possessed by artificial intelligence. AI is a programmable function and system that enables devices to learn, reason and process information as human intelligence does. Machine learning (ML) is a subset of AI.

Keywords

- Artificial Intelligence
- Machine Learning
- Human Intelligence
- Internet of Things

Introduction

AI's give accurate and swift results if they are coded properly compared to human intelligence. The biggest advantage of AI's are that they can conquer any natural/man-made disasters like defusing a bomb, going to mars etc., Normally human-beings can work for a limited time-period but AI's can work 24/7 inexhaustibly and monotonously unlike human-beings.

The Internet of things is a system of interconnecting electronic devices via the internet without human involvement. It allows the electrical objects to assemble and transfer

data embedded with sensors through wireless networks.

IoT is a virtual connection of things via the internet where inter-human or human-to-machine interaction is not required. It encourages the communication between devices or machines, popularly known as Machine-to-Machine (M2M) communication which helps to maintain transparency in the processes. By adopting this technology, the optimum utilization of energy and the quality of life can be enhanced. It also saves time, money and provides better efficiency with accurate results.

Physical objects + sensor and microprocessors= IoT

Focusing on the positive traits of both Artificial Intelligence (AI) and Internet of things (IoT) it leads to a powerful technology named AIoT.

In AIoT, the internet of things (IoT) serves as the digital nervous system whereas artificial intelligence is the brain of the system. In IoT the objects or "things" such as sensors, actuators, refrigerators, wearable devices, digital assistants connected to the internet. This collects the data and processes it to function optimally. In AI the system learns and completes the

task intelligently. Therefore, when AI is added to IoT it collects, analyzes, makes decisions and finishes the job without the intervention of humans. Hence it is known as Artificial Intelligence of Things (AIoT).

The general outline of flow of information of AI in IoT structured as follows:

- Preliminary communication: Data is collected from the real environment for the various systems.

3. Office Buildings
4. Autonomous Delivery Robots
5. Self-Driving Cars



Conclusion:

In future, further advancement in science fiction technology leads to “smart cyber revolution”. Everything will be smart and will be connected to the internet. The integration of AI and IoT can be analysed by human behaviour through Bluetooth, momentary devices, or face-identification/biometric technology and make the changes according to the given instructions, for e.g., voice assistant (Alexa- dim the lights, play music). Through AIoT, educational opportunities will be promoted and there will be more skilled labour.

The concept of AIoT is an innovative technology in the market which includes powerful technologies such as AI and IoT leading to a better change in the world. This technology helps to accomplish more efficient operations, good human-machine interactions and to improve the data analysis and management.

- Context communication: Data is processed by the systems and responds accordingly based on the framework.
- Internal communication: It is a hybrid communication of both preliminary and context communication.

Practical examples of AIoT:

1. Smart Retail
2. Drone and CCTV traffic monitoring

Our lives are being controlled by technology, and everyone is depending on it for everything which may increase rapidly in upcoming years too. Whatever be the case, humans should still have power over all the man-made smartness. Only then we can control this revolution without getting confined to it.

AI + IoT=Super Powers of Innovation



Mamidi Kalpana is a Final year student pursuing Mtech. from G.Narayanamma Institute of Technology and Science (for women). Her area of interest is in Electrical and electronics. Machine Learning & Artificial Intelligence, Business Analytics & Intelligence are some of the new technologies she recently learned about. She is a very detail-oriented and hardworking person. She has a good knowledge over MATLAB Software.

It is a great opportunity to write an article for Cybernomics 2020 with the title “Integration of Artificial Intelligence (AI) And Internet of Things (IoT)”.

mamidikalpana18@gmail.com

Annexure I

| Submission Date | Submission Id | Word Count | Character Count |
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Reviewers Comment

Reviewer Comment 1: The paper shows the importance of AIOT in real life usage. The author has combined AI in IOT which is a new concept uprising and advancement in technology with the internet.

Reviewer Comment 2: The paper is concentrated on the current set-ups of the technology and its applications in the present scenario which is particularly focusing more towards smart revolution and gives the scope to be explored in other fields.

Reviewer Comment 3: The article has very well shown the integration of AI and IoT tools and their advantages in real life and what all they promise for the time coming.



Editorial Excerpt

The article has 0% plagiarism which is an acceptable percentage for publication. The comments related to this manuscript are noticeably related to the interpretation of Artificial Intelligence and Internet of things. Artificial intelligence (AI) is a software which makes a machine function like the human mind. Internet of Things (IoT) is a system of interconnecting electronic devices via the internet without human intervention. Integrating AI and IoT accomplish more efficient operations, improves the data analysis and management. This AIoT technology can be analysed by human behaviour through Bluetooth, face recognition/biometric and alter according to the given instructions (eg: Alexa-voice assistant). After editorial board observations and remarks the article has been earmarked and finalized under the “**Theme Based Paper**” category.

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Disclaimer

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