International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 08 Issue: 04 | Apr 2021 www.irjet.net p-ISSN: 2395-0072

Combust of Artificial Intelligence and Internet of Things

Alex Manuvel[1], Ajinkya Patil[2], Ayush Patni[3], Tapan Jain[4]

[1,2,3,4]*Department of Computer Engineering, Mukesh Patel School of Technology Management & Engineering, NMIMS University, Shirpur 425405, India*

Abstract - *John McCarthy clarifies man-made brainpower (AI) and Internet of Things (IoT) as "the science and designing of making wise machines, especially wise projects. Man-made consciousness and IoT is a technique to turn a PC controlled robot or programming-controlled machine that 'thinks' admirably, in a way like the manner in which right disapproved of person think.*

***Key Words*: advances, internet of things, artificial intelligence, AI, IoT, research paper.**

1. INTRODUCTION

The blooming technology of the current world is Artificial Intelligence and Internet of things. This technology has been ubiquitous. Let us start with Artificial Intelligence (AI): Artificial Intelligence term can be called as "ROBOTS WITH THE BRAIN".

Artificial Intelligence have made through the important branches: AI, profound learning, neural organizations while Internet of Things term can be called as the "ROBOTS WITH THE HEART".

Internet of Things is the communication between the one system to another. Internet of Things is the organization of things that are installed with sensors, programming, and other technologies and which allows these things to connect, interact, and exchanging of data. What will happen if both BRAIN and HEART combine with each other.

Thus, IoT and AI can empower the advancement of important administrations for residents, organizations, and public offices, in different spaces, like transportation, energy, medical care, schooling, and public security.

2. HISTORY

2.1 History of Artificial Intelligence

(1662) First mechanical ascertaining machine worked by French Mathematician and creator Blaise Pascal.

(1837) First plan for a programmable machine by Charle Babbage and Ada Lovelace.

(1943) Foundation of neural organization set up by Warren McCulloch and Walter Pitts, drawing matches between the cerebrum and the processing machines.

(1950) Alan Turing presents a test "The Turing Test"- as a method of testing a machine's intelligence.

(1955) Artificial Intelligence is instituted during a meeting dedicated to the subject.

(1965) ELIZA, a characteristic language program is made. ELIZA handles exchange on any point; comparative idea is the present chatbots.

(1980s) Edward Feigenbaum makes master frameworks which copy choices of human experts.

(1997) Computer program created by engineers "Deep Blue" beats elite chess champ Darry Kosparov in game.

(2002) iRobot dispatches Roomba, an independent vacuum cleaner.

(2009) Google constructs the principle self-driving vehicle to deal with metropolitan conditions.

(2011) IBM's Watson computer competed on the show Jeopardy!

(2011-2014) Ian Goodfellow thinks of Generative Adversarial Networks (GAN).

(2016) AlphaGo beats professional Go player Lee Sedal (4-1).

(2018) Most colleges have courses in Artificial Intelligence.

2.2 History of Internet of Things

(1969) ARPANET, the forerunner to the Internet, was created.

(1982) Carnegie-Mellon scientists associated a candy machine to the web so they can distantly check for cold sodas.

(1990) John Romkey shows the primary toaster oven controlled by means of the Internet.

(1995) The GPS satellite network (version 1) is completed.

(1999) The expression "Web of Things" was first utilized by Kevin Ashton of MIT.

(2000) LG declares the main keen fridge.

(2009) Google begins testing self-driving cars.

(2013) Google Glass was delivered. Too early, evidently VR and AR were in early stages.

(2014) Amazon delivered the Echo, which sets off a scramble to enter the brilliant home center point market.

(2016) GM, Lyft, Uber, and Tesla are largely trying self-driving vehicles. Mirai, the principal huge scope IoT assault, additionally took place.

(2017-2019) IoT keeps on developing as Internet infiltration, AI, Block-chain, edge figuring and modest gadgets and sensors multiply Method. To blend both the technologies in single platform, there are multiple IDE (Integrated Development Environment) which is used to connect with AI.

Generally, Artificial Intelligence can be seen in different software like Teachable Machine (Google), Content DNA platform, Google Cloud Machine Learning Engine, AZURE Machine Learning Studio, TensorFlow, H2O AI, Open CV, Cortana, IBM Watson, Salesforce Einstein, Infosys Nia, Amazon Alexa.

Microcontroller for IoT, Microcontrollers can be considered as little PCs that are added to any genuine thing or space to give it a frontal cortex. They contain at any rate one PC processors, close by memory and programmable information/yield peripherals — all in a singular consolidated circuit. Most IoT applications require some different option from adding a sensor to a genuine article.

3. Project on AIoT

3.1 Evaluation and Improvement of a Victim Detection

The Project presents an analysis of the current state of the art of the Wow-bagger's Face Detection (Fig 1)

Fig 1: Wow-bagger's Face Detection

3.2 Hands|On – Human Computer Interface glove

The Hands|On Glove (Fig 2) records the wearer's hand and finger movements and gestures. The data is collected through a variety of sensor on the glove and send to a microcontroller, which possess the data to the real time of the hand. Developers can write a variety of applications using the information about the hand. For example, it could be used to:[6]

1. Translate sign language using an ML model.

2. Control robots

3. Use your hand as a computer mouse.

The possibilities are endless! It is up to the human requirements.

Fig 2: The Hands|On Glove

3.3 Face Mask Detection and Temperature Detection with Access control system:

This machine (Fig 3) is based on AI, which detects mask and temperature of human body. This machine is used during COVID-19 Pandemic. The machine is designed and developed by Mukul Malviya and Diptanshu Malviya from India.

Fig 3: Face Mask Detection and Temperature Detection with access control system

4. DISCUSSION

The impact of both the technologies could go onto a much higher level, if block-chain is introduced in the combust. Apparently, this field does not have much deep dive use in application of internet of things. Other than AI and IoT, block-chain will have a great impact on the world. Multiple companies had started their work on AI and IoT with many intensives like battlefield work.

5. CONCLUSION

Through this research paper, beginner level learner can enhance their knowledge in wide range view or Eagle view on AI and IoT. AI and IoT are next revolutionary technologies which will help to change and improve the human intellectual view.

ACKNOWLEDGEMENT

We would like to thank all the teachers and our colleague Mr. Diptanshu Malviya, who is working in this field for a long time, so that we don't need to do everything from scratch.

REFERENCES

[1] IoT and AI for Smart Government: A Research Agenda - ScienceDirect

[2] Eliza, Computer Therapist (fullerton.edu)

[3] History of Artificial Intelligence - Queensland Brain Institute - University of Queensland (uq.edu.au)

[4] History of IoT: A Timeline of Development - IoT Tech Trends

[5] Evaluation and Improvement of a Victim Detection | Hackaday.io

[6] Hands|On - Human computer interface glove | Hackaday.io

[7] https://diptanshumalviya.wixsite.com/tvastesolutions