



# Challenges, Opportunities and Policy of Artificial Intelligence

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**ABSTRACT:** Artificial Intelligence (AI) has gotten on the increase along with technology being therefore sophisticated and our experts are taking a look at exactly how that affects social media analytics on the entrepreneur, the trader actions in stock markets, and various other financial contexts. We will additionally inquire exactly how AI as well as social networking sites affects a company internally. The initial thing that our team have to do is calculate was AI is actually, AI is a cross corrective area that has observed media hype as well as improvement in for a couple of years currently. Some people might achieve AI with bettor's fallacy, which is a misconception where an individual encourage on its own that individual events possibility will be affected by previous events.

**KEYWORDS:** Artificial Intelligence, policy, challenges, opportunities

## I. INTRODUCTION

Artificial Intelligence (AI) is a science as well as a collection of computational technologies that are influenced by-- however typically run quite in a different way coming from-- the ways folks utilize their nerve systems as well as physical bodies to sense, know, explanation, as well as do something about it. While the rate of progress in AI has been actually uneven and also uncertain, there have been considerable innovations since the area's creation sixty years back. When a mainly academic area of study, 21st century AI allows a constellation of mainstream innovations that are having a significant impact on everyday lives. Computer vision as well as AI organizing, for instance, drive the video games that are currently a greater show business than Hollywood. Deeper learning, a form of machine learning-based upon layered portrayals of variables described as neural networks, has produced speech-understanding useful on our phones and in our kitchens, and also its protocols could be administered largely to an assortment of uses that count on pattern awareness. Natural Language Processing (NLP) and knowledge portrayal and also reasoning has allowed a machine to beat the Risk champ and are bringing brand-new power to Internet searches.

While remarkable, these innovations are very adapted to certain activities. Each application normally requires years of specialized research as well as cautious, special building. In likewise targeted uses, substantial boosts in the future use of AI technologies, including even more self-driving cars, medical care diagnostics and targeted treatments, and physical aid for elder care could be anticipated. AI, as well as robotics, are going to likewise be used across the globe in industries straining to attract much younger labourers, including horticulture, meals processing, satisfaction centres, and manufacturing plants. They will assist in the shipment of internet investments via soaring drones, self-driving vehicles, or even robotics that can get up the steps to the frontal door.

This report is the initial in a collection to be released at frequent periods as a portion of the One Hundred Year Research on Artificial Intelligence (AI100). Beginning with a charge given due to the AI100 Standing up Committee to consider the probable effects of AI in a normal N. United States city by the year 2030, the 2015 Study Board, comprising professionals in AI and also various other pertinent regions focused their focus on 8 domain names they took into consideration very most notable: transport; solution robots; medical care; education and learning; low-resource neighbourhoods; public safety and security as well as safety and security; job and place of work; and home entertainment. In each of these domains, the record both assesses progression previously fifteen years and also foresees developments in the coming fifteen years. Though reasoning a usual source of research, each domain name shows different AI determines and also tests, like the difficulty of generating risk-free as well as dependable components (transport as well as company robots), the challenge of properly communicating with individual pros (health care and also education and learning), the challenge of obtaining social rely on (low-resource areas and also public protection and also safety and security), the obstacle of overcoming concerns of marginalizing human beings (employment and also work environment), as well as the social and popular risk of decreasing social communications (enjoyment). The record starts along with an image about what constitutes Artificial Intelligence, as well as concludes with referrals regarding AI-related plan. These recommendations consist of building up technological know-how regarding AI in authorities and committing additional



resources-- and clearing away restraints-- to research on the justness, surveillance, personal privacy, and also social impacts of AI systems.

In contrast to the much more amazing predictions for AI in the preferred push, the Research Panel discovered no source for concern that AI is a likely danger to humanity. No makers along with self-reliant long-term targets and intent have been built, nor are they very likely to become created in the future. Instead, significantly useful applications of AI, with a possibly great favourable influence on our culture and also economic situation are most likely to arise between right now and 2030, the period this file looks at. Concurrently, most of these growths will spark interruptions in exactly how human labour is increased or changed by AI, making brand new obstacles for the economy as well as a community a lot more extensively. Application concept, as well as plan selections made in the near condition, are very likely to possess resilient influences on the attribute as well as directions of such developments, making it crucial for AI scientists, designers, social experts, and policymakers to balance the important to introduce with systems to ensure that AI's economic and social perks are generally shared around culture. If culture methods these modern technologies predominantly with concern and also suspicion, slips that reduce AI's growth or even steer it underground will certainly lead, hampering necessary work on guaranteeing the protection as well as dependability of AI innovations. Alternatively, if society methods AI with a much more open mind, the modern technologies developing coming from the industry can greatly improve the culture for the better in the happening years.

## II. PROS AND CONS OF ARTIFICIAL INTELLIGENCE

AI supplies integrity, cost-effectiveness, resolve difficult issues, and decide; additionally, AI restrains data coming from obtaining dropped. AI is used nowadays in the majority of fields whether service or engineering. Among the wonderful devices in AI is contacted "reinforcement learning" which is based upon testing excellence as well as failing in the real world to raise the reliability of documents. Unfortunately, AI is confined to its capacity as well as functionality.

Although Artificial Intelligence made our lives much easier as well as conserved our company even more time than ever before, researchers are predicting that due to the massive dependence on AI humanity might die out. Researchers argue that by having AI equipment, folks will be jobless and that will certainly end in shedding the sense of living. Given that devices are learning and doing thigs a lot more successfully and also efficiently in a timely fashion, this may be the factor of our extinction.

### What are the Similarities Between Machine Learning and Artificial Intelligence?

- Both can be used to build sophisticated systems to perform certaintasks.
- Both are based on Statistics andMathematics.
- Machine Learning is the new cutting-edge technology ofArtificial Intelligence.

### What is the Difference Between Machine Learning and Artificial Intelligence?

Machine Learning vs Artificial Intelligence	
Machine Learning is a type of Artificial Intelligence that gives the ability for a computer to learn without being explicitly programmed. It uses an algorithm to parse data, learn from it and make decisions accordingly.	Artificial Intelligence is the theory and development of computer systems able to perform tasks intelligently similar to a human being.
Functionality	
Machine Learning focus on accuracy and patterns.	Artificial Intelligence focuses on intelligent behavior and the maximum change of success.
Categorization	
Machine Learning can be categorized to Supervise Learning, Unsupervised Learning and Reinforcement Learning.	Artificial Intelligence based applications can be categorized as applied or general.



### III. TYPES OF INTELLIGENCE

As illustrated by Howard Gardner, the United States developing psycho therapist, Intelligence comes in multifold:

Intelligence	Description	Example
Linguistic intelligence	The ability to speak, recognize, and use mechanisms of phonology (speech sounds), syntax (grammar), and semantics (meaning).	Narrators, Orators
Musical intelligence	The ability to create, communicate with, and understand meanings made of sound, understanding of pitch, rhythm.	Musicians, Singers, Composers
Logical-mathematical intelligence	The ability to use and understand relationships in the absence of action or objects. It is also the ability to understand complex and abstract ideas.	Mathematicians, Scientists
Spatial intelligence	The ability to perceive visual or spatial information, change it, and re-create visual images without reference to the objects, construct 3D	Map readers, Astronauts, Physicists

### IV. BACKGROUND TECHNOLOGY

This part illustrates the basic context of the article and also the source style to create. It defines smart education, features, obstacles and an effective range for the endorsement style.

#### A. *Technology Enabled Learning*

ICT-based education and learning have been related to an assortment of components, such as training, learning, research, trainees protection and also grounds monitoring. This uses a new approach to global, premium quality, and also tailored learning. Along with technology, educational designers deliver detailed ICT solutions to ensure contemporary education and learning advancement. Customized learning is vital for colleges given that it supplies opportunities for students that frequently are certainly not accessible in a lot of small places. Personalized learning helps to exceed most of the restrictions confronting country trainees, like geographics as well as restricted training course possibility and get access to.

A lot of college establishments (HIE) are right now including brand-new modern technologies with their primary instructional services like a mentor, learning, research, management, safety as well as civil services. Educational software developers created academic program along with software-defined social network (SDN), upcoming- creation, intelligent school networks and information facilities to bear teaching as well as research applications. Despite the web discussion forums, many students still find face time with their educators. The MOOC systems are additionally satisfying this requirement for students to comply with through on the internet social media gateways. Significant data and also cloud computing are transforming both education styles and also ICT progression. Cloud computer promotes profiting from anywhere and also anytime.

Smart education (or even e-Learning) adjustments training and learning in colleges making use of present-day innovation. The instructors may educate from anywhere and pupils may pick up from anywhere as well as anytime. Teachers can easily adapt a turned- class approach more often and students can take possession of their learning. Educators can easily publish brilliant materials - video recordings, records, audio podcasts and also active images for pupils to use. These resources can be accessed through a student's intelligent tools via Wi-Fi, 3G/4G and also 5G.

As swift progression and brand innovations influence, education is coming to be even more beneficial as well as valued throughout the globe. Some variables are intense yet important to move to teach and also learning for the pupils' international success as well as they are budget plan and also sources, neighbourhood collaborations, curriculum,



direction, and also assessment, information and personal privacy, customized learning, robust infrastructure, use of the area as well as time, etc.

### **B. Smart Education**

Smart education is a breakthrough kind of modern learning utilizing details as well as interaction modern technologies. Smart education has become of necessary value in today's planet. Smart education is "a model of learning adapted to brand-new creations of electronic natives". In contrast to traditional classroom training models, smart education is an interactive, collaborative as well as visual design, created to enhance student engagement and also permit educators to adapt to students' skill-sets, rate of interests and also learning preferences. There is a set of features for intelligent learning setting as well as they are flexible, independent, performance, performance, involving, versatile, individualized and also scalable.

The various parts of smart education consist of wise learning, wise training, smart assessment, smart classroom, clever help, brilliant grounds as well as clever operations. Smart Learning concerned with the control and delivery of learning material and information to trainees. Smart Examination interested in the monitoring of trainees' functionality and also supplying teachers as well as surveyors with a continual circulation of clues and prognosis of pupils' progress. Smart Class worried about establishing technology-enabled classrooms. Smart Assistance concerned with trainees and team support. Smart Workflow addresses all parts of day-to-day operations in an instructional institute. Smart Grounds interested in the bodily commercial infrastructure of the college, its buildings and also electricals, greenness, and safety. Smart instructors, smart rearing and clever atmosphere make the learner smart as well as prepared to encounter the difficulties of the learning.

Smart School. Smart campus advancement depends on agile and trustworthy ICT platforms, featuring comprehensive wireless network insurance coverage, a cordless school, complete safety defence as well as IoT. Smart grounds infrastructure answers offer the clever school along with setting sensing, mobile phone Web, Big Data analysis platform and more. The app of computer and also network technologies speeds up campus details development into the era of digital school construction. The present-day innovations, such as cloud processing, IoT, information centre and also significant data changes electronic campuses into smart ones. A smart grounds sustains mentor as well as research, improve service high quality and enables linked decision-making.

Smart Classroom. Smart classroom cracks the conventional training model in the class, bringing to ICT model-based training. It makes it possible for instructors, trainees as well as moms and dads to join the training method and delight in the entire smart training knowledge before, in and after the class. A smart class is generally geared up with lots of interactives media parts to enrich the training and also learning. A tiny class is actually "as a sophisticated implementation of modern technology for universities through delivering resources and information for learning". The electronic classrooms ideas include mainly IoT. The principles of clever classrooms are considered throughout developing. The design transforms learning areas in modern-day wise classrooms. The attributes of the intelligent class are user interface, plug-and-play, and navigating, elements of guidelines, satisfying presentation, virtual laboratories, narration and also matches the current curriculum. There are a lot of fundamental principles of a smart class: flexibility, convenience, connection, lots, visibility, customization as well as safety.

## **V. AI POLICY, NOW AND IN THE FUTURE**

The procedure of excellence for AI uses is the worth they produce for individual daily lives. Because light, they must be developed to enable folks to comprehend AI systems properly, participate in their use, as well as develop their rely on. Public law must help soothe culture's adjustment to AI uses, expand their benefits, and reduce their unavoidable inaccuracies as well as failings. Controversy about how AI is deployed, featuring problems concerning exactly how privacy is defended and AI's advantages fairly discussed, should be motivated. Provided the rate along with which AI modern technologies are being realized, and also associated with concerns concerning their implications, the Research study Panel encourages that all levels of authorities acquire technological experience in AI. Further, research on the justness, surveillance, personal privacy, as well as popular ramifications of AI units ought to be motivated through getting rid of restraints as well as boosting private and public investment to sustain it.

Currently in the United States, at least sixteen different companies govern fields of the economic condition related to AI technologies. Rapid advances in AI research as well as, specifically, its apps need professionals in these markets to establish new concepts as well as metaphors for rule and plan. That is liable when a self-driven auto accident or an intelligent medical unit stops working? Exactly how can AI functions be protected against coming from promulgating



racial discrimination or even financial unfaithful? That should enjoy the increases of efficiencies enabled through AI innovations and what protections should be afforded to people whose skill-sets are left outdated? As individuals combine AI extra broadly as well as heavily into commercial procedures and also buyer products, finest techniques require to be spread out, and also regulative routines adjusted.

While the Research study Board does rule out it very likely that near-term AI units are going to autonomously select to inflict damage on individuals, it will be achievable for folks to utilize AI-based systems for unsafe in addition to handy functions. And also though AI protocols may be capable of going down swayed decisions than a common person, it stays a deep-seated specialized difficulty to make certain that the data that inform AI-based choices can be kept free from predispositions that could cause bias based on race, sexual orientation, or even other elements.

Confronted with the profound adjustments that AI innovations can make, tension for "even more" and also "more durable" guideline is perhaps inevitable. False impressions regarding what AI is and also is not might fuel opposition to innovations with the possible to benefit everyone. The improper regulatory activity would be an unfortunate error. The poorly informed guideline that suppresses advancement, or even moves it to other jurisdictions, will be detrimental.

Luckily, concepts that assist successful rule of present electronic innovations supply a beginning point. In privacy rule, extensive legal mandates combined along with challenging transparency criteria and also relevant enforcement-- instead of meticulous commands-- encourage providers to establish processes as well as professional workers to impose privacy controls, take on along with outdoors stakeholders, as well as confirm their methods to technical advancements. This subsequently assists the advancement of professional business affiliations as well as requirements boards that disperse better practices. In AI, too, regulators can easily boost a righteous pattern of task involving interior and also an external obligation, transparency, and also professionalization, rather than slender compliance.

## VI. LEARNING ANALYTICS

Information sets being accumulated coming from substantial scale online learning devices, ranging from MOOCs to Khan Academy, along with much smaller range online courses, have sustained the quick development of the area of learning analytics. Online courses are certainly not merely great for extensive shipping but are organic lorries for records collection and experimental machinery that will contribute to scientific searchings for and strengthening the top quality of learning at the range. Organizations including the Society for Learning Analytics Research (SOLAR) and the growth of conferences including the Learning Analytics and also Knowledge Conference and the Learning at Range Event (L@S) demonstrate this fad. This area uses deep learning, natural language processing, as well as other AI methods to review of pupil involvement, habits, and results.

Present ventures find to model typical student false impressions, anticipate which students are at risk of failure, as well as offer real-time student responses that are firmly combined with learning results. Current work has also been devoted to recognizing the intellectual processes associated with understanding, composing, expertise accomplishment, and moment, as well as to administering that knowing to informative process through the building and also evaluating educational technologies.

## VII. CHALLENGES AND OPPORTUNITIES

One may possess expected increasingly more innovative use of AI innovations in colleges, colleges, and also educational institutions now. Much of its lack could be discussed by the shortage of funds of these establishments and also the shortage of records creating the innovations' efficiency. These complications are being addressed, albeit little by little, by private associations and also through numerous plans to educate primarily high school instructors in summer programs. As in other locations of AI, excessive buzz and also guarantees regarding the abilities of MOOCs have indicated that requirements frequently go beyond the truth. The adventures of specific companies, such as San Jose Condition College's trying out Udacity, have led to the more clean evaluation of the capacity of the brand-new informative technologies.



## VIII. CONCLUSION

Artificial Intelligence is an advance and a broad discipline. It contains many various other industries including Design, Mathematics, Computer Science and so on. The variation in between Machine Learning as well as Artificial Intelligence is actually that Machine Learning is a form of Artificial Intelligence that gives the ability for a personal computer to learn without being set as well as Artificial Intelligence is the idea and advancement of personal computer devices capable to do duties intelligently identical to a human. Machine Learning is the new advanced modern technology of Artificial Intelligence.

## REFERENCES

1. Qualman, E. (2013). *Socialnomics: How Social Media Transforms the Way We Live and Do Business*. Hoboken, NJ: Wiley.
2. R. C. Cavalcante, R. C. Brasileiro, V. L. Souza, J. P. Nobrega, and A. L. Oliveira, "Computational intelligence and financial markets: A survey and future directions," *Expert Systems with Applications*, vol. 55, pp. 194 – 211, 2016. [Online]. Available: <http://www.sciencedirect.com/science/article/pii/S095741741630029X>
3. Rosenberg, Louis. "Artificial Swarm Intelligence vs Human Experts," *Neural Networks (IJCNN)*, 2016 International Joint Conference on. IEEE. J. Clerk Maxwell, *A Treatise on Electricity and Magnetism*, 3rd ed., vol. 2. Oxford: Clarendon, 1892, pp.68–73
4. Samuel, Jim. (2020). *Information Token Driven Machine Learning for Electronic Markets: Performance Effects in Behavioral Financial Big Data Analytics*.
5. Sugandhi Maheshwaram, "A Comprehensive Review on the Implementation of Big Data Solutions", *International Journal of Information Technology and Management* Vol. XI, Issue No. XVII, November-2016
6. Sugandhi Maheshwaram, "A Novel Technique for Preventing the SQL Injection Vulnerabilities", *International Journal of Research and Applications*, Volume 5, Issue 19, 2018
7. Sugandhi Maheshwaram, "A Study on Security Information and Event Management (SIEM)", *International Journal of Research and Applications*, Volume 5, Issue 17, Jan-Mar 2018
8. Sugandhi Maheshwaram, "Architectural Framework of Cloud Computing Environment", *International Journal of Scientific Research in Science, Engineering and Technology*, Volume 4, Issue 1, January-February 2018
9. Sugandhi Maheshwaram, "An Overview of Open Research Issues in Big Data Analytics", *Journal of Advances in Science and Technology*, Vol. 14, Issue No. 2, September-2017
10. Sugandhi Maheshwaram, "A Study on Vulnerabilities, Applications, Advantages and Routing Protocols in MANET", *International Journal of Scientific Research in Science and Technology*, Volume 4, Issue 1, January-February 2018
11. Sudheer Kumar Shriramoju, "Access Control and Density Based Notion of Clusters", *International Journal of Scientific Research in Science and Technology (IJSRST)*, Online ISSN : 2395-602X, Print ISSN : 2395-6011, Volume 1 Issue 3, pp. 215-220, July-August 2015.
12. Sudheer Kumar Shriramoju, "Review on NoSQL Databases and Key Advantages of Sharepoint", *International Journal of Innovative Research in Science, Engineering and Technology*, ISSN(Online): 2319-8753, ISSN (Print): 2347-6710, Vol. 7, Issue 11, 2018.
13. Sudheer Kumar Shriramoju, "Capabilities and Impact of SharePoint On Business", *International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT)*, ISSN : 2456-3307, Volume 2, Issue 6, November-December-2017.
14. Sudheer Kumar Shriramoju, "Security Level Access Error Leading to Inference and Mining Sequential Patterns", *International Journal of Scientific Research in Science, Engineering and Technology*, Volume 2, Issue 4, July-August 2016
15. Sudheer Kumar Shriramoju, "An Overview on Database Vulnerability and Mining Changes from Data Streams", *International Journal of Information Technology and Management*, Vol. VII, Issue No. IX, August-2014
16. Sudheer Kumar Shriramoju, "Integrating Information from Heterogeneous Data Sources and Row Level Security", *Journal of Advances and Scholarly Researches in Allied Education*, Vol. IV, Issue No. VIII, October-2012
17. Sudheer Kumar Shriramoju, "A Review on Database Security and Advantages of Database Management System", *Journal of Advances in Science and Technology*, Vol. V, Issue No. X, August-2013
18. Sudheer Kumar Shriramoju, "Security Challenges of Service and Deployment Models", *International Journal of Scientific Research in Science and Technology*, Volume 4, Issue 8, May-June 2018
19. Sudheer Kumar Shriramoju, "Cloud security - A current scenario and characteristics of cloud computing", *International Journal of Research and Applications*, Volume 5, Issue 18, Apr-Jun 2018



20. Sudheer Kumar Shriramoju, "SECURITY ISSUES, THREATS AND CORE CONCEPTS OF CLOUD COMPUTING", Airo International Research Journal, Volume IX, Feb 2017.
21. Malyadri. K, "An Overview towards the Different Types of Security Attacks", International Journal of Innovative Research in Computer and Communication Engineering, Vol. 2, Issue 8, August 2014
22. Malyadri. K, "Security Threats, Security Vulnerabilities and Advance Network Security Policies", International Journal of Innovative Research in Science, Engineering and Technology, Vol. 2, Issue 9, September 2013
23. Malyadri. K, "Need for Key Management in Cloud and Comparison of Various Encryption Algorithm", International Journal of Scientific Research in Computer Science, Engineering and Information Technology , volume 1, issue 1, July-August 2016
24. Malyadri. K, "Integration of Appropriate Analytic tools towards Mobile Technology Development", International Journal of Innovative Research in Computer and Communication Engineering, Vol. 6, Issue 6, June 2018
25. Malyadri. K, "A STUDY ON EXPERIENCES AND LIMITATIONS OF MOBILE COMMUNICATION", Alochana Chakra Journal, Volume VI, Issue VIII, August 2017
26. Malyadri. K, "CHALLENGES CONCERNING MOBILE DEVELOPMENT AND MODEL-DRIVEN DEVELOPMENT OF MOBILE APPS", Airo International Research Journal, volume XVI, 2018
27. Malyadri, N. Surya Teja, "Related technologies and the role of mobile app development life cycle", International Journal of Research and Applications, Volume 5, Issue 17, Jan-Mar 2018.