



## ARTIFICIAL INTELLIGENCE IN THE GROWTH AND THE ROLE OF ENVIRONMENTAL GREEN MANAGEMENT

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### Abstract

As everyone is moving toward creating smart, environmentally friendly organizations in the current climate, information technology (IT) has had a significant impact human resource management (HR) practices and processes. Green HRM is assuming an urgent part in the combination of corporate environmental management into human resource management. Artificial intelligence is another area of HR Innovation that can possibly supplant or work on the viability of green human resource management systems. Associations might use artificial intelligence to screen up-and-comers, draw in workers, reconnect representatives, and advance vocations without utilizing a ton of resources, diminishing the complete environmental impact. It may improve the efficacy of green human resource management and be applied to HR policies, processes, and HR perspectives. Through the use of secondary data, the research will examine how artificial intelligence is becoming more prevalent in green HRM processes as well as its potential advantages. The report offers ideas on how to use technology to transform efficient human resources into long-term HR.

**Keywords: Artificial Intelligence, Green Human Resource Management, Potential benefits, HRM Process.**

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### INTRODUCTION

The surrounding natural environment is growing more and more important to human growth and its potential degradation may constitute a barrier. In this century, our world has seen a rise in population, urbanization, and industrialization that has compelled society to question if humans are affecting the basic circumstances that support life. Environmental science is an interdisciplinary study that examines how human activity affects environmental processes. Thusly, it thinks about both human action and environmental processes. The effects of humans on the environment are often referred to as "pollution" in the widest sense.

As several authors have noted, the environment is a complicated and dynamic framework where different elements can make the similar end result, (for example, the discharge of gases that add to an Earth-wide temperature boost), while different activities might consolidate synergistically to have an effect that is essentially more prominent than what might be anticipated utilizing a reductionist methodology (such as the reaction between nitrogen dioxide and hydrocarbons that results in tropospheric ozone). Therefore, further research is needed to determine the potential effects that the important factors will have.

The complicated character of the global change issue may be modeled by a number of interactions that take

place at distinct spatiotemporal scales. In order to address these problems, pertinent interactions between people and the environment must be taken into account holistically.

At many different dimensions and throughout a wide range of time periods, information technology has become more important in the preparation, forecast, oversight, and control of environmental processes. The Public Environmental Strategy Act (NEPA) of the US from 1969-1970 filled in as a model for associations, enterprises, and legislatures who have started to adopt a more proactive strategy to the environment by presenting proper regulation requiring the unequivocal thought of environmental effect in the preparation and dynamic process for huge ventures, (for example, the Kyoto Highest point and Plan 21). The rapid development of new, faster technology over the last two decades has allowed multidisciplinary research collaborations between environmental and computer scientists both feasible and highly successful.

Environmental Informatics is a brand-new subject that incorporates study in areas including artificial intelligence, geographic data frameworks (GIS), demonstrating and reenactment, UIs, and that's only the tip of the iceberg. Filling in as an impetus for the combination of information, data, and information from many sources in the environmental area is a crucial and challenging role for this emerging domain. We shall examine the contributions of artificial intelligence to the area in this essay.

### **The Green AI Approach for Human and Planetary Prosperity**

Since the modern upheaval of the 1850s, and prominently in the beyond fifty years, the effects of human movement, for example, impractical and rapidly growing populaces, urbanization, industrialization, and commercialization—have had a negative impact on the environment. According to Hunter and Hewson, the following are the greatest dangers to mankind right now:

- Chemical contamination of the seas and atmosphere, as well as the whole earth system;
- Ecosystem collapse what's more, loss of biodiversity;
- The diminishment of regular resources, particularly water;
- Climate change brought on by humans and global warming;
- Increase in human population beyond what Earth can support;
- Failures on a public and worldwide level to perceive these dangers and make a preventive move;
- Atomic weapons and other disastrous weapons;
- Pandemics of novel, incurable illnesses;
- Diminishing nutritional quality and rising food insecurity;
- The introduction of strong, unchecked new technologies

"Public and worldwide inability to comprehend and act defensively on these dangers" is the most significant of these concerns. This refers to the inability of governments and the general population to comprehend and respond to risks that will almost certainly or definitely result in a catastrophe. Even while AI solutions aim to be sustainable, this problem is the fundamental reason why they have failed, since they are mostly employed to boost corporate productivity and efficiency in our urban communities as opposed to really tending to the previously mentioned worldwide issues, which are essentially anthropogenic in nature.

The Holocene's advantageous conditions—the planet's ideal temperature and ecosystem—have led to the flourishing of humanity during the last 10,000 years. As a result, much recent research work has focused on examining the ways in which AI might contribute to the creation of circumstances that will allow humanity and the earth to survive in the Anthropocene.

The Environment class has the most noteworthy potential, with 93% of the objectives being decidedly impacted, as indicated by their review, while Society has the biggest adverse consequence, with 38% of the objectives showing a negative communication with man-made intelligence.

### **Principles for Greener AI and Smarter Cities**

The argument presented in this paper, which advocates the need for a green AI strategy to further promote the development of smart cities and the SDGs, adds to the expanding body of literature on AI by highlighting the inherent flaws in conventional AI system conceptualizations and practices.

The study also offers a viewpoint on the idea of green AI. It describes the idea in detail, provides explanations for its need, and explores the advantages of a more aggressive green AI strategy. The literature from a variety of fields, counting PC, environmental, and sociologies, as well as metropolitan investigations, upholds the elaborations. The production of advanced foundation for green artificial intelligence is likewise shrouded in the review. The objective is to examine this foundation related issues close by other undeniable level issues and to introduce an exhaustive outline so different networks engaged with strategy and framework exploration can fathom cross-disciplinary issues and work together to develop comprehensive, globally ideal solutions.

The study also presents also, characterizes the thought of "green detecting" as physical and virtual green detecting to permit triple primary concern (social, environmental, and monetary) maintainability to help the advancement of green man-made intelligence, both at the arrangement and foundation levels. This essay also emphasizes the significance of and urges the necessity for the creation of tools and methodologies for assessing social, environmental, and economic sustainability.

### **Environment-Related Decision-Support Techniques**

Environmental Choice Emotionally supportive networks might be arranged into two unmistakable gatherings, issue explicit EDSS and circumstance and

issue explicit, using the categorization system suggested by Rizzoli and Young. In the finest KBS tradition, problem-specific EDSS are designed for a limited number of environmental issues (or domains), but they may be used in a variety of diverse settings. Situation- and problem-specific EDSS are designed for a particular environmental issue and a particular area. As opposed to many KBS, these EDSS are more difficult to apply in a new place. Additionally, Rizzoli and Young list a number of desired characteristics for a perfect EDSS in the same study that is typical of all Knowledge-Based Systems (KBS):

1. The capacity to gather, represents, and organizes knowledge in the research area.
2. The knowledge base's capacity to segregate data from models.
3. The inclination for working with geographic information (the GIS component).
4. The ability to give top to bottom data applicable to the field of interest
5. The ability to be used effectively for management, arranging, advancement, and diagnostics
6. The ability to help the client in issue conceptualization and strategy determination

### **LITERATURE REVIEW**

With the aid of smartphones, healthcare, or even just by identifying issues and coming up with solutions, AI aims to benefit as many people as possible. However, the fundamental goal of AI has always been to build tools that can think just like people (Marr, 2019).

The 17 Economical Improvement Objectives are characterizing the worldwide advancement plan as we move into the Period of Reasonable Turn of events (Sachs, 2015), and computer based intelligence is rapidly opening up another boondocks in the domains of business, corporate practices, and administrative strategy. Profound learning-empowered machine and automated intelligence is as of now settling mental issues that are ordinarily connected with human intelligence.

As per (Goralski and Tan 2020, p. 7), "it required something like 200,000 years for humankind's mind to create from normal to artificial, and 10 years to break the connections with "earth" to relocate to the "cloud" Humanity has gleaned some significant knowledge about being human, how human intelligence is coordinated, and the way that individuals learn and procure ability throughout the advancement of simulated intelligence.

A few towns and countries will benefit mentally and monetarily from the improvement of computer based intelligence, while others will fall behind. The creation and execution of lawful and administrative systems as well as the components expected to direct simulated intelligence are now being outperformed by the innovation's quick development (Munoz and Naqvi, 2018). Most experts who make these systems and methods believe an extremely extensive stretch to be just 20 years, however a great many people imagine as far as scholastic examination cycles or political cycles, which are both rather brief periods of time (Harari, 2019).

Researchers, financial specialists, government authorities, and policymakers are developing more worried that computer based intelligence will supplant human laborers, robotize fighting, and outperform human intelligence because of mechanical headways (like those in the fields of PC vision, mechanical technology, and discourse acknowledgment). The physicist and cosmologist Stephen Hawking believes that because of our sluggish biological processes, we are readily replaceable by clever robots. (Ebrahim 2020)

### **Research Questions**

- ✓ Are problems with human resources (HR) present?
- ✓ Will technology eliminate employment in HR?
- ✓ Will robotization, AI, and artificial intelligence (simulated intelligence) change how it runs, from enrolling to overseeing individuals?

### **PROPOSED METHODOLOGIES**

Applied research is the foundation of this essay. Secondary data gathered from several articles and journal publications is used to support research.

In the instance of applied hypothesis of exploration, it is linked to actual research on things like improving machine efficacy, expanding output via better material quality, strictly controlling pollution, introducing new disease vaccinations, etc. Due to their considerable potential, Green HRM was launched. Thanks to several adjustments to the HR regulations, it is now widely accepted in the market.

### **DATA ANALYSIS**

All facets of society have benefited greatly from artificial intelligence, but human resource management in particular. The management of human resources has developed in many sectors and is now helping to reduce societal pollution. An app called Ask Dexter was recently developed by a Bengaluru-based IT administrations organization and is fundamental to dealing with its 22,000+ laborers. The inside, cloud-based chat bot was created two years ago and performs numerous HR tasks, including answering staff questions on leave and corporate policy. It responds to requests for technical help and offers straightforward methods of employee appreciation at all organizational levels. It specializes in providing a summary of positions available and new occupations that will be delivered from now on, along with the ideal capacities for each.

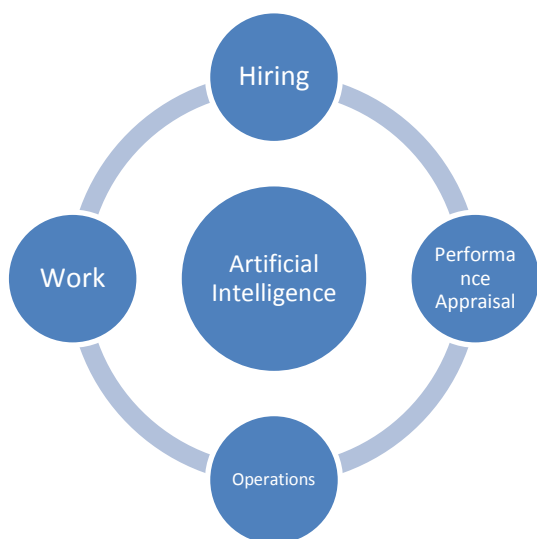


Figure-1 AI-Green Human Resource Management Relationship Model

According to the previously mentioned model, it is clear that artificial intelligence is valuable in numerous parts of green human resource management and directly supports all HR practices, some of which are main practices are addressed below:

**Hiring:** Artificial intelligence helps better than humans to analyze and filter CVs based on the profile needed and also saves time.

**Performance evaluation:** Modern technologies and data analytics enable daily performance evaluation rather than quarterly and semiannual evaluations. The process of appraisal is ongoing, thus it shouldn't be done annually.

**Operations:** A number of chat rooms and message boards are accessible to address a range of staff inquiries. In addition, a number of applications have been created to provide both workers and customers with quick answers. Almost every aspect of HR operations today has tech-managed components.

**Workforce:** A variety of IT organizations are continuously on the lookout for innovation and creativity, but as long as they don't put restrictions on it, businesses will keep on recruiting inventive people, representing a risk to the market leaders.

As per the latest report, Green HRM computes over 20% of HR consistence, and it is resolved that utilizing innovation decreases the probability of error to a base while increasing the proportion of human error.

Additionally, this technique has improved efficiency and saved time by cutting between 55% and 60% of the usual recruiter's workload. This robotization, which has generally taken more than 80% of the HR helpdesk, is endeavoring to switch it over completely to 100 percent in a short amount of time.

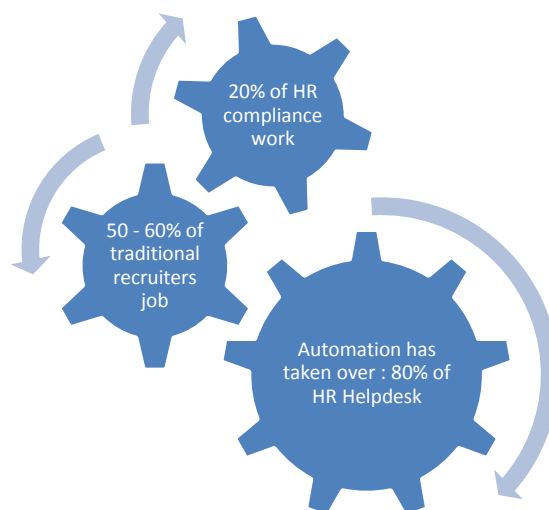


Figure-2 Ability, Motivation and Opportunity: AMO in HR

AMO Structure in IS Exploration Ability, Motivation and Opportunity develops under this, there are some work framework parts that shape representative capacity and add to the progress of the business. IS research for of grasping buyer conduct in electronic medium? A system that considers the skill, motivation, and opportunity of the workers is optimal for the organization.

Employees are more capable, motivated, and given chances to contribute to the business because to this.

These theoretical ideas are used by the sectors to provide businesses a great management instrument that can decide every representative's exhibition, which further makes a huge commitment to the association's prosperity.

In the year 2000, Appelbaum et al. created a model outlining how the capacity to choose, educate, and compensate employees based on their profiles and experiences is crucial to the success of any HR research. In reference to the present situation, this model is an updated version of the one stated above.

#### Analyzing HR practices in light of current developments



Figure-3 HR activities in recent trend

An alternate framework using commitment audit and Quality constructions is claimed to be applied for the expansion of human resource management, a subject matter that is generally accepted. In this situation, compensation, perks, additional bonuses, incentive, and dedication are the most useful instruments used by workers to improve each company's success.

#### Motivating Green Employees

To gauge the guidelines of environmental changes throughout every single authoritative division and to deliver helpful substance on the critical environmental execution of units and staff, the process of execution management and its examination for worker management can introduce many difficulties.

By improving their performance in accordance with environmental requirements and beginning to implement different green information systems to monitor and effectively use for the advantages of environmental performance, many businesses are attempting to comprehend this problem.

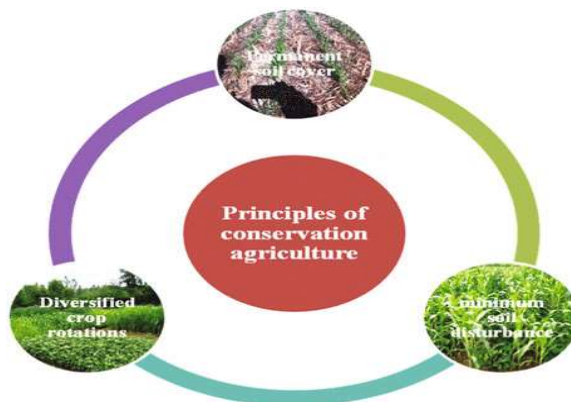


Fig 4: The conservation agriculture covers three basic principles: (i) direct seeding or planting or minimum soil disturbance; (ii) minimum soil disturbance or direct seeding, maintaining soil cover permanently or semipermanently ; and (iii) diversified crop rotation

#### CONCLUSION

This study discussed how artificial intelligence techniques have been utilized to resolve environmental issues and how they have opened up additional opportunities for the turn of events and utilization of artificial intelligence instruments, to be specific Environmental Choice Emotionally supportive networks. The Environmental Impact Assessment has made extensive use of several of these technologies.

The knowledge-based tools that AI approaches provide to speed up issue detection are one of the key

components of their use in this field. One more thought is the combination of a few man-made intelligence approaches with mathematical as well as measurable models into a solitary framework, which offers further developed exactness, trustworthiness, and utility. In numerous real applications, they are as of now utilized as an establishment for upgraded navigation. At least one associated models, mathematical reenactment models, rule-or case-driven, topographically scattered, and coordinated with a GIS will frame the underpinning of the incorporated EDSS of the future. As Guariso and Werthner have recently said, EDSS can't and won't do the errands that should be finished by individuals. Better PC help doesn't necessarily convert into better decisions.

#### **FUTURE SCOPE**

The following are our key insights about how AI could affect sustainable development: AI is already a significant business that has the potential to replace low-skilled labor on an economic basis. Technically speaking, as AI develops, it may learn and teach itself how to code, potentially disrupting employment in the information technology (IT) sector. AI has the potential to have a detrimental influence on sustainability in terms of electricity and resource use, as well as waste and pollution control. On a personal level, AI may have an effect on the workplace; provide user's access to agents, and influence interactions or social isolation. Finally, AI may play a tiny role on the social level by aiding in communities, running social media, automating typical outsourcing jobs, and taking part in digital storytelling. The key finding of our sustainability research is that AI may have both good and negative effects on all five dimensions. On the one hand, this appears nearly strange, but on the other hand, it makes sense since AI is a means, not a goal.

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