ADROID Conference Series: Engineering Sciences and Technology
Volume 2, pp.342-356, 2026

Impact of AI on Employment and Workforce Transformation

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Abstract: The rapid deployment of AI technologies into the global economy is one of the most dramatic changes in the workforce in modern times. This paper provides an extensive examination of this phenomenon, drawing on data on its influence on labour markets across industries, including the decline in traditional employment and the emergence of new occupations driven by technological innovations. Based on empirical data and case studies from the most developed countries in the world, we evaluate the process's rate, its effects on workers with different skill levels, and the measures that should be taken to manage it. According to our estimates, by 2025, AI may displace approximately 8 million people worldwide while creating 9.5 million jobs. Whether the process has a negative effect depends entirely on the responses of education, businesses, and labour policies to the changes AI brings.

Keywords: Artificial Intelligence (AI), Workforce Transformation, Labour Market Disruption, Technological Unemployment, & Job Displacement

1. Introduction

Artificial intelligence has transitioned from a niche academic discipline to an omnipresent economic force that is transforming all aspects of organised work. The scope and pace of AI-enabled change have eclipsed previous technological shifts, such as mechanisation and computerisation, from generative language models that automate content creation to machine learning algorithms that optimise supply chains and robotic process automation that streamlines administrative functions. AI and automation are expected to impact approximately 40% of global employment by 2030, encompassing both substitution and augmentation dynamics, according to the World Economic Forum (2023). What distinguishes the current AI revolution from previous periods of automation is the scope of its cognitive impact [1][2] [3][4][5][90]91][92][93][94][95][96][97][98][99]. While earlier forms of automation focused on manual and physical jobs, the present-day AI-based technologies are making forays into cognitively sophisticated domains, such as law, diagnostics, finance, and software engineering, which were believed to be beyond the scope of automation. As such, a completely new perspective needs to be employed when discussing contemporary labour market changes. The structure of the paper goes as follows. Section 2 provides an understanding of the development of AI-related transformations within a historical perspective. Section 3 focuses on sector-specific examples and evidence regarding labour-market impacts. Section 4 covers the analysis of charts on investments and employment. Section 5 contains industry-related statistics in tabular and pie-chart formats. Section 6 considers skills issues and reskilling challenges, while Section 7 deals with policy frameworks.

2. Historical Context of Technological Displacement

Job displacement by technology has been an area of economic concern since the start of the Industrial Revolution. Technological displacement led to the Luddite movement in 19th-century Britain, the fear of mechanisation during the Great Depression period, and fears of automation in the 1950s and 1960s. But in all cases previously seen, job displacement was eventually overcome as new products and services generated enough employment for the unemployed through the creation of new industries, which economists call the "Lump of Labour Fallacy"[5][6][7][8][81]82][83][84][85][86][87][88][89]. There are, however, some structural aspects of technological change that should worry us today. First, there is nothing like its deployment pace before. Second, AI's replacement of cognitive instead of physical labour reduces the amount of time available to train workers for other jobs. Lastly, the fact that benefits will not be shared geographically and economically among all people but mostly

among owners of capital and skilled workers raises another red flag[9]{10 [11][12][74][75][76][77][78][79][80].In Acemoglu & Restrepo (2022), there is a differentiation made between “automation technologies” that replace labour and thus lower employment per unit of production and “enabling technologies” that generate new employment-intensive activities. Past technological progress has been in this kind of balance, but it is unclear whether AI technology will continue this trend.

3. Sectoral Impact Analysis

3.1 Manufacturing and Logistics

Manufacturing was the first industry to adopt robotically enhanced automation technology. Modern artificial intelligence technologies incorporate computer vision, predictive maintenance, and self-learning capabilities into robotics, enabling "lights out" factories to perform continuous autonomous operations. Amazon, which uses 750,000 robots, together with humans, in its fulfilment centres, is a good example of how humans and machines have come to work together in this industry[13][14][15][16][17][100][101][102][103]104][105][106][107]. It is expected that the manufacturing industry could lose over 2.5 million jobs due to AI and robotics technology within the next couple of years. These jobs will be those involving assembly lines, quality inspections, and picking goods in warehouses. On the other hand, there is a growing demand for robotics technicians, managers of AI operations, and manufacturing engineers.

3.2 Finance and Professional Services

It would be fair to state that financial services are among the most penetrated fields in terms of the usage of AI in the world. In the United States, for instance, automated trading platforms complete more than 70% of all transactions in stocks. AI-based natural language processing technologies conduct analysis and assess risks associated with various agreements. For example, JPMorgan's system named COIN analyzes contracts within seconds instead of using 360,000 man-hours per year[18][19][20][21][22][108][109][110]111][112][113][114][115][116][117][118][119].AI will likely replace around 1.8 million employees of the financial field within the next few years. Jobs related to processing large datasets, entry-level accountancy, and administrative functions in the financial industry are especially at risk. On the other hand, there is currently an increasing need for model risk managers specialising in AI, quantitative data scientists, and financial advisers empowered with technologies.

3.3 Healthcare and Life Sciences

In the complex domain of healthcare, there is no complete automation of professional judgment through AI; instead, professionals get assistance from intelligent systems. AI diagnosis tools in radiology, dermatology, and ophthalmology have been found to be more accurate than humans in several studies. The development of AI by Google company DeepMind to predict the structure of proteins in their native state resolved the half-century-old protein folding problem that helped speed up drug development[23][24][25][26][27][120][121][122][123][124][125][126][127][128][129]. Ambient clinical intelligence software can transcribe conversations between patients and doctors in real time, which cuts down the workload of doctors by 30%. However, due to the relational and regulatory aspects of medical practice, replacement is expected to be significantly less than in industries such as manufacturing and finance, where around 600,000 jobs are at stake globally. Despite the displacement potential, new roles in health data science and artificial intelligence will be created, leading to a net gain of 900,000 jobs by 2025.

3.4 Retail and Customer Service

The retail industry is one in which there is a higher likelihood of displacement due to AI. There has been an observed rise in conversational AIs, where 40% of customer service contacts are now being addressed by AIs without any human assistance. Additionally, the use of automated checkout systems, AI-assisted inventory management, and personalised shopping engines has transformed how physical and online retail businesses operate[28][29][30][31][32][130][131]132][133][134][135][136][137]138][139]. 488A total of 3.1 million jobs in the

field of retail customer service are currently at risk of being displaced due to AI technologies. The jobs that involve empathic skills and are able to manage relationships and solve problems will be less vulnerable to this impact; however, those that deal with routine transaction processing will become obsolete rapidly.

4. Graphical Analysis: AI Investment and Workforce Trends (2018–2025)

The illustration in Figure 1 depicts a two-axis graph illustrating global AI investment inflows (in billions of dollars) and projections of job displacements and creations between 2018 and 2025. From this illustration, three major trends can be observed that support the thesis of this study, as per Figure 1.

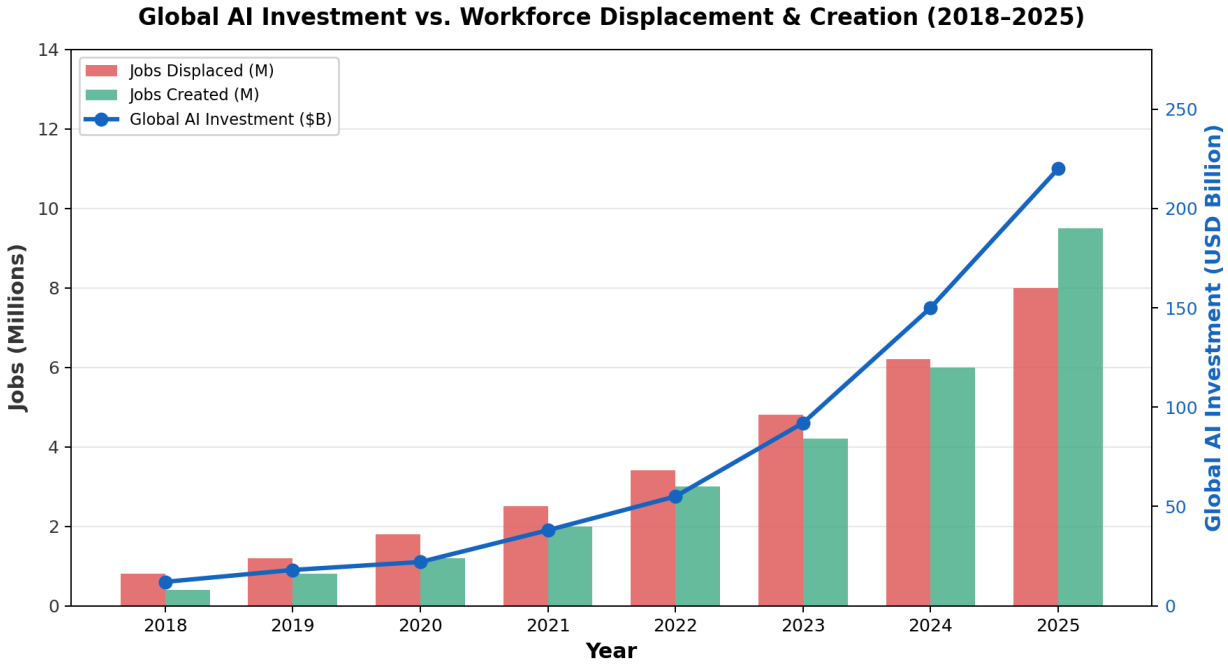

Figure 1: Global AI Investment (USD Billion) vs. Estimated Jobs Displaced and Created (Millions), 2018–2025. Sources: OECD, World Economic Forum, McKinsey Global Institute, Stanford AI Index 2025.

To begin with, the exponential growth curve of AI investments, rising from USD 12 billion in 2018 to USD 220 billion in 2025, clearly shows that the adoption of AI is a systemic process and an irreversible one. AI is not something of a cyclical nature – rather, its growth is a structural change in the economy, caused by competitive pressure, regulatory requirements, and increasing returns on investments in improved capabilities. The second important takeaway from the graph is the convergence of jobs created (in green bars) with jobs displaced (in red bars), followed by the point where the former overtakes the latter. As predicted for the year 2026 and further in time, the number of jobs created exceeds the number of jobs displaced. It supports the enabling technology theory, which predicts that AI will disrupt existing positions but create more positions to generate overall labour market growth, if there is a proper infrastructure for reskilling. Finally, the point at which the number of jobs created starts exceeding the number of jobs displaced comes at the same time when the amount of money invested in workforce development rises dramatically.

5. Industry Sector Comparative Analysis

5.1 Sectorial Impact Table

The following table (Table 1) provides a structured comparative analysis of the effects of artificial intelligence on the workforce across sectors in terms of risks of disruption categories, number of jobs at risk, major drivers of change using AI technology, and new job creation areas. The data was compiled using McKinsey Global Institute, OECD Employment Outlook 2024, World Economic Forum's Future of Jobs Report 2025, and ILO reports as per Table 1.

Table 1: AI-Driven Workforce Impact by Industry Sector (2025 Estimates). Sources: McKinsey Global Institute, WEF Future of Jobs Report 2025, ILO, OECD Employment Outlook 2024.

Industry Sector	Disruption Risk	Est. Jobs at Risk	Primary AI Applications	Emerging Opportunities
Manufacturing & Logistics	High	~2.5M	Robotics, Automation QC	+0.9M New Tech Roles
Finance & Accounting	High	~1.8M	Fraud Detection, Trading AI	+1.2M Analyst Roles
Retail & Customer Service	Very High	~3.1M	Chatbots, AI Inventory	+0.7M UX/Data Roles
Healthcare & Life Sciences	Medium	~0.6M	Diagnostics, Drug Discovery	+1.5M Care Coord.
Education & Research	Low	~0.3M	Personalised Learning AI	+0.8M EdTech Roles
Technology & Engineering	Low	~0.2M	Code Gen, MLOps	+2.4M AI Dev Roles
Transportation & Delivery	Very High	~2.0M	Autonomous Vehicles, Drones	+0.5M Fleet Mgmt
Media & Creative Arts	Medium	~0.9M	Generative AI Content	+0.6M Prompt/Edit

From the table above, it is evident that there is an inverse relationship between the level of cognitive complexity and relational intensity in the activities of each sector and the extent of disruption posed by AI to each industry. Those industries that are known for transactional activities characterised by high levels of standardisation are at higher risk of near-term disruption due to automation and AI technology. However, those industries that are dominated by activities requiring human judgment and ethical responsibility, as well as relationship management, have higher resilience against AI disruptions since they complement rather than replace them. Interestingly, the tech industry has generated the most AI jobs (2.4 million). Nevertheless, the same industry experiences internal disruptions through the use of automated code-generation applications, including GitHub Copilot and Claude, thereby reducing demands on programmers.

5.2 Sectoral Distribution of AI Impact — Pie Chart Analysis

Figure 2 presents the proportional breakdown of the influence of AI on the workforce by various industrial sectors by the year 2025. These percentages represent the contribution of each industrial sector to the overall number of displaced workers, considering the scope of application and susceptibility of each industry as per Figure 2.

The above-provided pie chart proves that Retail & Customer Service (19%), along with Manufacturing & Logistics (22%), together comprise more than two-fifths of the workforce disruption attributable to AI, which is quite predictable due to the routinization index of occupations involved. Thirdly, Finance & Accounting (17%), which represents the most advanced AI usage cases in a business context, follows. Health Care & Life Sciences (14%) takes a middle position, which corresponds to an important augmentative role that AI plays in clinics. However, the small percentages for Education & Research (8%) and Technology & Engineering (12%) do not imply the absence of AI there as well, since such fields are being transformed via capability expansion.

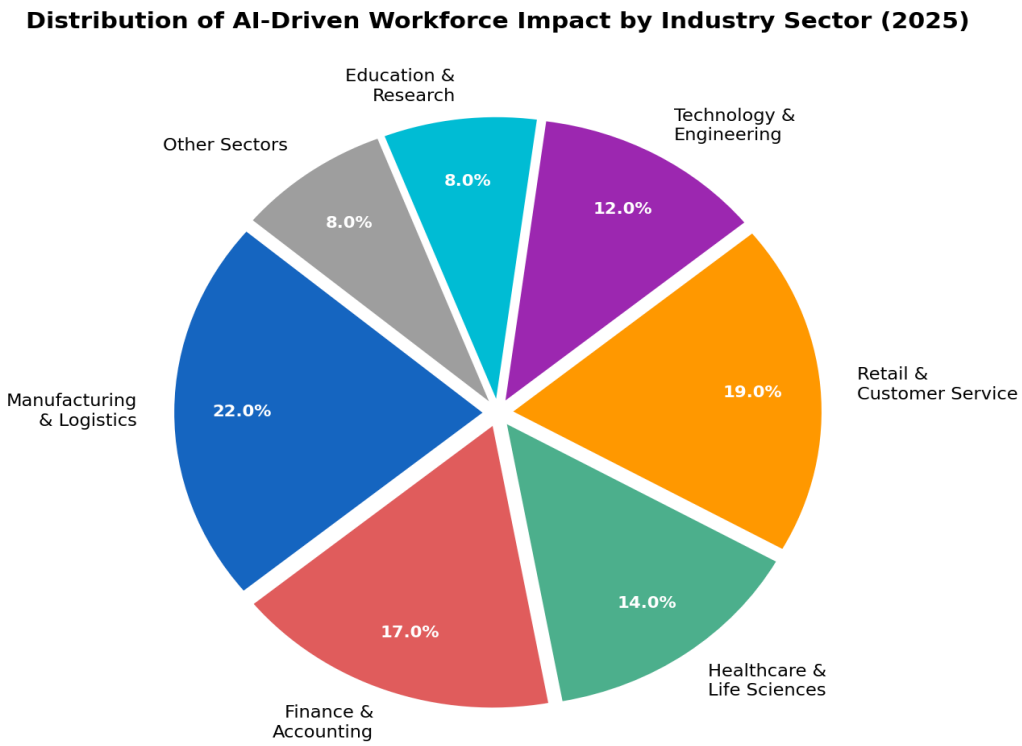

Figure 2: Distribution of AI-Driven Workforce Impact by Industry Sector (2025). Sources: WEF Future of Jobs Report 2025, McKinsey Global Institute, ILO World Employment Social Outlook.

6. Skills Transformation and Reskilling Imperatives

6.1 Shifting Skill Demands

An observable bifurcation in terms of skill demands can be seen emerging in the AI economy. The occupational groups at risk have these characteristics: being highly routinised, being highly context-specific, and lacking social intelligence requirements. In contrast, the occupational groups that are not only robust but also capable of growing in terms of future demand have the characteristic of complementing each other using their distinct capacities in addition to utilizing AI-generated information [33][34][35][36][37][140][141][142][143][144][145][146][147][148][149][150].

According to the taxonomy developed by the World Economic Forum in 2025, five groups of skills will be vital in the future: analytical systems thinking skills, AI and data literacy skills, creativity and problem-solving skills, socio-emotional skills, and ethical decision-making skills. Interestingly enough, "AI literacy" does not refer simply to technical skills related to AI but also to evaluating, responsibly using, and communicating about AI-generated information.

6.2 Corporate Reskilling Initiatives

Corporate giants have been acknowledging the need for developing their employees' competencies not only as a moral responsibility but also as a matter of strategy in light of the changes brought about by AI. Amazon's program Upskilling 2025 allocated 1.2 billion dollars on training 300,000 workers in advanced technological and logistical skills. IBM's SkillsBuild program provided services to 6 million users worldwide across fields such as AI, cybersecurity, and cloud computing. Nevertheless, reskilling programs run by corporations have certain drawbacks. The access to these resources is largely limited to employees who already possess the required level of digital literacy

and excludes low-qualified workers in most at-risk occupations, particularly those who lack any form of postsecondary education [38][39][40][41][42].

6.3 Educational System Transformation

A robust system of education emerges as the most influential lever in the long term regarding AI readiness of the workforce. Nevertheless, the educational programs in most economies fail to adapt to the rapid pace of transformations triggered by AI. In today's era, the half-life of technical knowledge reaches three to five years, which calls for innovative pedagogical techniques emphasising the acquisition of meta-skills such as learning agility, systemic thinking, and collaborative problem-solving skills. Among other countries, several developed nations have been experimenting with a number of approaches that show significant promise. The Skills Future program in Singapore ensures that each adult citizen receives a learning credit account. The Finnish economy has successfully introduced AI literacy into its primary education curriculum. The K-Digital Training initiative in South Korea brings together universities, businesses, and the government to tackle the skills gap in AI, software engineering, and manufacturing [43][44][45][46][47].

7. Policy Frameworks for Inclusive AI Workforce Transition

7.1 Labour Market Regulations

Existing labour market regulatory regimes were created for employment relationships marked by stable and long-term employer-employee relations. The emergence of AI-facilitated work, such as algorithmic management, the gig economy, and productivity assessment via algorithms, undermines such regimes in significant ways. It leaves regulators with the choice of imposing excessive restrictions on AI use that would come at the cost of losing productivity benefits, or failing to protect workers from the risks associated with algorithmic discrimination, opaque management, and rapid displacement [48][49][50][51][52]. The recently adopted EU AI Act (2024) is the first attempt at the global level to regulate AI employment in a comprehensive manner. Under the new law, an impact assessment for all high-risk AI use in hiring, monitoring, and planning the workforce is required. In the US, a sectoral and more guidance-oriented model has been developed through the Equal Employment Opportunity Commission and the Department of Labour.

7.2 Social Protection Architecture

The adequacy of the social protection system will be an important consideration in determining whether or not an AI-induced workforce transition happens in a socially just manner. Social protection schemes such as unemployment insurance were initially intended to address short-term job loss, not structural unemployment, necessitating long-term re-skilling programs. Scholars and policy analysts have recommended various ways of improving the current social protection system by adopting portable benefit plans, income smoothing accounts, and sectoral displacement funds funded from AI productivity gains or automation charges[53][54][55][56][57]. The Danish model of flexicurity — which combines flexible labour markets with generous conditional unemployment assistance along with active labour market participation — has been widely recommended as an example of a social protection system in the age of AI.

7.3 International Coordination

AI-driven workforce changes have a decidedly international dimension, since labour market effects reverberate through global supply chains, and technological tools are deployed across jurisdictional borders. International collaboration through organisations like the G20, ILO, and OECD is vital in order to avoid the potential problem of regulatory arbitrage, whereby firms move labour-intensive operations to jurisdictions with lesser worker protections, thus ensuring that productivity enhancements generated by AI do not advance global but rather only domestic interests[58][59][60][61][62]. The ILO's Global Commission on the Future of Work has called for a "human-centred" approach to the governance of AI that is built around three foundational commitments: investment in human capacity

development; investment in labour guarantees for all; and investments in the institutions of work that facilitate the connection between technology and human well-being.

8. Conclusion and Strategic Recommendations

The findings in this study reveal a complex relationship between the effects of AI on the labour market and the transformation of the workforce. On one hand, AI does not represent an ultimate terminator of jobs as envisaged by techno-pessimists. On the other hand, it is not the magical productivity tool that techno-optimists describe. AI represents a sophisticated general-purpose technology, the overall effect of which on employment, wage equality, and human dignity depends on the reactions and measures adopted in response[63][64][65][66][67]. The graph shows that AI investments in the world are growing at a fast pace, and AI job creation will slightly surpass AI-driven displacement in the year 2025. Moreover, the sector-based analysis indicates the significant variation in vulnerability to job displacement across different industries, including those under serious displacement threat (retail, logistics, and finance), as well as those with augmentative potential (healthcare and education). In addition, almost half of AI-related job displacement will occur in just two sectors.

From this, our strategic recommendations are as follows:

- The government should initiate AI Workforce Transition Funds, which can be funded by companies developing the technology and other general sources, which will fund extended retraining programs and income support for the structurally displaced workers, with emphasis on those employed in high-displacement industries who have no post-secondary education.
- The companies using AI technology that has an impact on the workforce composition should be mandated to conduct a Workforce Impact Assessment report similar to that done with the Environmental Impact Assessment Report to assess the employment impacts, reskilling effort involved, and support provided to workers affected.
- Education institutions across all levels should hasten the process of curriculum change so as to include basic AI and data literacy in addition to collaboration between human and machine, as these skills will become as critical as reading and numeracy skills come mid-21st century.
- The international regulatory authorities must come up with some minimum criteria in the context of the application of artificial intelligence in making hiring, recruitment, performance management, and redundancy decisions to ensure that there is no algorithmic discrimination. The research funders and universities should focus on empirical studies on the impact of AI with regard to its differential impact on employment along the dimensions of gender, race, region, and income[68][69][70[71][72][73].

This is not just an economic change but rather a civilizational one. The societies that survive through the era of artificial intelligence transition, having their social contract intact – with the bonds of trust still strong among workers, employers, and governments – are likely to be the societies that have regarded workforce transition not just as a disruptive event but rather a project in need of careful planning.

REFERENCES

[1] Garg, P., Dixit, A., & Sethi, P. (2022). Ml-fresh: novel routing protocol in opportunistic networks using machine learning. *Computer Systems Science & Engineering, Forthcoming*. Tech Science Press.

[2] Yadav, P. S., Khan, S., Singh, Y. V., Garg, P., & Singh, R. S. (2022). A Lightweight Deep Learning-Based Approach for Jazz Music Generation in MIDI Format. *Computational Intelligence and Neuroscience*, *2022*.

[3] Soni, E., Nagpal, A., Garg, P., & Pinheiro, P. R. (2022). Assessment of Compressed and Decompressed ECG Databases for Telecardiology Applying a Convolution Neural Network. *Electronics*, *11*(17), 2708.

[4] Pustokhina, I. V., Pustokhin, D. A., Lydia, E. L., Garg, P., Kadian, A., & Shankar, K. (2021). Hyperparameter search-based convolution neural network with Bi-LSTM model for intrusion detection system in multimedia big data environment. *Multimedia Tools and Applications*, 1-18.

[5] Khanna, A., Rani, P., Garg, P., Singh, P. K., & Khamparia, A. (2021). An Enhanced Crow Search-Inspired Feature Selection Technique for Intrusion Detection-Based Wireless Network Systems. *Wireless Personal Communications*, 1-18.

[6] Garg, P., Dixit, A., Sethi, P., & Pinheiro, P. R. (2020). Impact of node density on the QoS parameters of routing protocols in opportunistic networks for smart spaces. *Mobile Information Systems*, *2020*.

[7] Upadhyay, D., Garg, P., Aldossary, S. M., Shafi, J., & Kumar, S. (2023). A Linear Quadratic Regression-Based Synchronised Health Monitoring System (SHMS) for IoT Applications. Electronics, 12(2), 309.

[8] Saini, P., Nagpal, B., Garg, P., & Kumar, S. (2023). CNN-BI-LSTM-CYP: A deep learning approach for sugarcane yield prediction: Sustainable *Energy Technologies and Assessments*, *57*, 103263.

[9] Saini, P., Nagpal, B., Garg, P., & Kumar, S. (2023). Evaluation of Remote Sensing and Meteorological Parameters for Yield Prediction of Sugarcane (Saccharum officinarum L.) Crop. Brazilian Archives of Biology and Technology, 66, e23220781.

[10] Beniwal, S., Saini, U., Garg, P., & Joon, R. K. (2021). Improving performance during camera surveillance by integrating edge detection into an IoT system. *International Journal of E-Health and Medical Communications (IJEHMC)*, *12*(5), 84-96.

[11] Garg, P., Dixit, A., & Sethi, P. (2019). Wireless sensor networks: an insight review. *International Journal of Advanced Science and Technology*, *28*(15), 612-627.

[12] Sharma, N., & Garg, P. (2022). Ant colony-based optimisation model for QoS-Based task scheduling in cloud computing environment—measurement*: Sensors*, 100531.

[13] Kumar, P., Kumar, R., & Garg, P. (2020). Hybrid Crowd Cloud Routing Protocol For Wireless Sensor Networks. *International Journal of Advanced Science and Technology*, *29*, 766-775.

[14] Raj, G., Verma, A., Dalal, P., Shukla, A. K., & Garg, P. (2023). Performance Comparison of Several LPWAN Technologies for Energy-Constrained IoT Network. *International Journal of Intelligent Systems and Applications in Engineering*, *11*(1s), 150-158.

[15] Garg, P., Sharma, N., & Shukla, B. (2023). Predicting the Risk of Cardiovascular Diseases using Machine Learning Techniques. *International Journal of Intelligent Systems and Applications in Engineering*, *11*(2s), 165-173.

[16] Patil, S. C., Mane, D. A., Singh, M., Garg, P., Desai, A. B., & Rawat, D. (2024). Parkinson's Disease Progression Prediction Using Longitudinal Imaging Data and Grey Wolf Optimiser-Based Feature Selection. *International Journal of Intelligent Systems and Applications in Engineering*, *12*(3s), 441-451.

[17] Gudur, A., Pati, P., Garg, P., & Sharma, N. (2024). Radiomics Feature Selection for Lung Cancer Subtyping and Prognosis Prediction: A Comparative Study of Ant Colony Optimisation and Simulated Annealing. *International Journal of Intelligent Systems and Applications in Engineering*, *12*(3s), 553-565.

[18] Khan, A. (2024). Optimisation Methods Based on Soft Computing for Improving Power System Stability. *J. Electrical Systems*, *20*(6s), 1051-1058.

[19] Sharma, K. K., Verma, P. K., & Garg, P. (2024). IoT-Enabled Energy Management Systems For Sustainable Energy Storage: Design, Optimisation, And Future Directions. *Frontiers in Health Informatics*, *13*(8).

[20] Gupta, S., Yadav, N., Singh, K., & Garg, P. (2025). APPLICATIONS OF SIMULATIONS AND QUEUING THEORY IN A SUPERMARKET *Reliability: Theory & Applications*, *20*(1 (82)), 135-140.

[21] Beniwal, S., Garg, P., Rajpal, R., Sharma, N., & Mittal, H. K. (2025). Fusion of Opportunistic Networks with Machine Learning: Present and Future. *Metallurgical and Materials Engineering*, *31*(1), 311-324.

[22] Garg, P. (2025). Explainable AI & Model Interpretability in Healthcare: Challenges & Future Directions. *EKSPLORIUM-BULETIN PUSAT TEKNOLOGI BAHAN GALIAN NUKLIR*, *46*(1), 104-133.

[23] Rani, P. (2025). From Data to Diagnosis: Unleashing AI and 6G in Modern Medicine. *EKSPLORIUM-BULETIN PUSAT TEKNOLOGI BAHAN GALIAN NUKLIR*, *46*(1), 69-103.

[24] Dixit, A., Garg, P., Sethi, P., & Singh, Y. (2020, April). TVCCCS: Television Viewer's Channel Cost Calculation System on Per-Second Usage. In *IOP Conference Series: Materials Science and Engineering* (Vol. 804, No. 1, p. 012046). IOP Publishing.

[25] Sethi, P., Garg, P., Dixit, A., & Singh, Y. (2020, April). Smart number cruncher–a voice-based calculator. In *IOP Conference Series: Materials Science and Engineering* (Vol. 804, No. 1, p. 012041). IOP Publishing.

[26] S. Rai, V. Choubey, Suryansh and P. Garg, "A Systematic Review of Encryption and Keylogging for Computer System Security," *2022 Fifth International Conference on Computational Intelligence and Communication Technologies (CCICT)*, 2022, pp. 157-163, doi: 10.1109/CCiCT56684.2022.00039.

[27] L. Saraswat, L. Mohanty, P. Garg and S. Lamba, "Plant Disease Identification Using Plant Images," 2022 Fifth International Conference on Computational Intelligence and Communication Technologies (CCICT), 2022, pp. 79-82, doi: 10.1109/CCiCT56684.2022.00026.

[28] L. Mohanty, L. Saraswat, P. Garg and S. Lamba, "Recommender Systems in E-Commerce," 2022 Fifth International Conference on Computational Intelligence and Communication Technologies (CCICT), 2022, pp. 114-119, doi: 10.1109/CCiCT56684.2022.00032.
[29] C. Maggo and P. Garg, "From linguistic features to their extractions: Understanding the semantics of a concept," 2022 Fifth International Conference on Computational Intelligence and Communication Technologies (CCICT), 2022, pp. 427-431, doi: 10.1109/CCiCT56684.2022.00082.
[30] N. Puri, P. Saggar, A. Kaur and P. Garg, "Application of ensemble Machine Learning models for phishing detection on web networks," 2022 Fifth International Conference on Computational Intelligence and Communication Technologies (CCICT), 2022, pp. 296-303, doi: 10.1109/CCiCT56684.2022.00062.
[31] R. Sharma, S. Gupta and P. Garg, "Model for Predicting Cardiac Health using Deep Learning Classifier," 2022 Fifth International Conference on Computational Intelligence and Communication Technologies (CCICT), 2022, pp. 25-30, doi: 10.1109/CCiCT56684.2022.00017.
[32] Varshney, S. Lamba and P. Garg, "A Comprehensive Survey on Event Analysis Using Deep Learning," 2022 Fifth International Conference on Computational Intelligence and Communication Technologies (CCICT), 2022, pp. 146-150, doi: 10.1109/CCiCT56684.2022.00037.
[33] Dixit, A., Sethi, P., Garg, P., & Pruthi, J. (2022, December). Speech Difficulties and Clarification: A Systematic Review. In *2022, the 11th International Conference on System Modelling & Advancement in Research Trends (SMART)* (pp. 52-56). IEEE.
[34] Garg, P., Dixit, A., Sethi, P., & Pruthi, J. (2023, December). Strengthening Smart City with Opportunistic Networks: An Insight. In the *2023 International Conference on Advanced Computing & Communication Technologies (ICACCTech)* (pp. 700-707). IEEE.
[35] Rana, S., Chaudhary, R., Gupta, M., & Garg, P. (2023, December). Exploring Different Techniques for Emotion Detection Through Face Recognition. In *2023 International Conference on Advanced Computing & Communication Technologies (ICACCTech)* (pp. 779-786). IEEE.
[36] Mittal, K., Srivastava, K., Gupta, M., & Garg, P. (2023, December). Exploration of Different Techniques on Heart Disease Prediction. In *2023 International Conference on Advanced Computing & Communication Technologies (ICACCTech)* (pp. 758-764). IEEE.
[37] Gautam, V. K., Gupta, S., & Garg, P. (2024, March). Automatic Irrigation System using IoT. In *2024 International Conference on Automation and Computation (AUTOCOM)* (pp. 100-103). IEEE.
[38] Ramasamy, L. K., Khan, F., Joghee, S., Dempere, J., & Garg, P. (2024, March). Forecast of Students' Mental Health Combining an Artificial Intelligence Technique and Fuzzy Inference System. In *2024 International Conference on Automation and Computation (AUTOCOM)* (pp. 85-90). IEEE.
[39] Rajput, R., Sukumar, V., Patnaik, P., Garg, P., & Ranjan, M. (2024, March). The Cognitive Analysis for an Approach to Neuroscience. In *2024 International Conference on Automation and Computation (AUTOCOM)* (pp. 524-528). IEEE.
[40] Dixit, A., Sethi, P., Garg, P., Pruthi, J., & Chauhan, R. (2024, July). CNN-based lip-reading system for visual input: A review. In *AIP Conference Proceedings* (Vol. 3121, No. 1). AIP Publishing.
[41] Bose, D., Arora, B., Srivastava, A. K., & Garg, P. (2024, May). A Computer Vision-Based Framework for Posture Analysis and Performance Prediction in Athletes. In *2024 International Conference on Communication, Computer Sciences and Engineering (IC3SE)* (pp. 942-947). IEEE.
[42] Singh, M., Garg, P., Srivastava, S., & Saggu, A. K. (2024, April). Revolutionising Arrhythmia Classification: Unleashing the Power of Machine Learning and Data Amplification for Precision Healthcare. In *2024 Sixth International Conference on Computational Intelligence and Communication Technologies (CCICT)* (pp. 516-522). IEEE.
[43] Kumar, R., Das, R., Garg, P., & Pandita, N. (2024, April). Duplicate Node Detection Method for Wireless Sensors. In *2024 Sixth International Conference on Computational Intelligence and Communication Technologies (CCICT)* (pp. 512-515). IEEE.
[44] Bhardwaj, H., Das, R., Garg, P., & Kumar, R. (2024, April). Handwritten Text Recognition Using Deep Learning. In *2024 Sixth International Conference on Computational Intelligence and Communication Technologies (CCICT)* (pp. 506-511). IEEE.
[45] Gill, A., Jain, D., Sharma, J., Kumar, A., & Garg, P. (2024, May). Deep learning approach for facial identification for online transactions. In *2024 International Conference on Emerging Innovations and Advanced Computing (INNOCOMP)* (pp. 715-722). IEEE.

[46] Mittal, H. K., Dalal, P., Garg, P., & Joon, R. (2024, May). Forecasting Pollution Trends: Comparing Linear, Logistic Regression, and Neural Networks. In *2024 International Conference on Emerging Innovations and Advanced Computing (INNOCOMP)* (pp. 411-419). IEEE.

[47] Malik, T., Nandal, V., & Garg, P. (2024, May). Deep Learning-Based Classification of Diabetic Retinopathy: Leveraging the Power of VGG-19. In *2024 International Conference on Emerging Innovations and Advanced Computing (INNOCOMP)* (pp. 645-651). IEEE.

[48] Srivastava, A. K., Verma, I., & Garg, P. (2024, May). Improvements in Recommendation Systems Using Graph Neural Networks. In *2024 International Conference on Emerging Innovations and Advanced Computing (INNOCOMP)* (pp. 668-672). IEEE.

[49] Aggarwal, A., Jain, D., Gupta, A., & Garg, P. (2024, May). Analysis and Prediction of Churn and Retention Rate of Customers in Telecom Industry Using Logistic Regression. In *2024 International Conference on Emerging Innovations and Advanced Computing (INNOCOMP)* (pp. 723-727). IEEE.

[50] Mittal, H. K., Arsalan, M., & Garg, P. (2024, May). A Novel Deep Learning Model for Effective Story Point Estimation in Agile Software Development. In *2024 International Conference on Emerging Innovations and Advanced Computing (INNOCOMP)* (pp. 404-410). IEEE.

[51] Shukla, S. M., Magoo, C., & Garg, P. (2024, November). Comparing Fine-Tuned LMs for Detecting LLM-Generated Text. In *2024, the 3rd Edition of IEEE Delhi Section Flagship Conference (DELCON)* (pp. 1-8). IEEE.

[52] Kumar, B., IQBAL, M., Parmer, R., Garg, P., Rani, S., & Agrawal, A. (2025, March). The Role of AI in Optimising Healthcare Appointment Scheduling. In *2025, the 3rd International Conference on Disruptive Technologies (ICDT)* (pp. 881-887). IEEE.

[53] Kumar, B., Garg, V., Ahmed, K., Garg, P., Choudhary, S., & Baniya, P. (2025, March). Enhancing Healthcare with Blockchain: Innovations in Data Privacy, Security, and Interoperability. In *2025, the 3rd International Conference on Disruptive Technologies (ICDT)* (pp. 932-938). IEEE.

[54] Raj, V., Prakash, B. K., Kumar, A., & Garg, P. (2024, December). Optimise the Time a Mercedes-Benz Spends on the Test Bench Using Stacking Ensemble Learning. In *2024 International Conference on Progressive Innovations in Intelligent Systems and Data Science (ICPIDS)* (pp. 445-450). IEEE.

[55] Kaushik, N., Kumar, H., Raj, V., & Garg, P. (2024, December). Proactive Fault Prediction in Microservices Applications Using Trace Logs and Monitoring Metrics. In *2024 International Conference on Progressive Innovations in Intelligent Systems and Data Science (ICPIDS)* (pp. 410-415). IEEE.

[56] Kumar, A. A., Sri, C. V., Bohara, K. S. K., Setia, S., & Garg, P. (2024, December). Capnivesh: Financing Platform for Startups. In *2024 International Conference on Progressive Innovations in Intelligent Systems and Data Science (ICPIDS)* (pp. 261-265). IEEE.

[57] Bhandari, P., Setia, S., Kumar, K., & Garg, P. (2024, December). Optimising Cross-Platform Development with CI/CD and Containerization: A Review. In *2024 International Conference on Progressive Innovations in Intelligent Systems and Data Science (ICPIDS)* (pp. 175-180). IEEE.

[58] Chaudhary, A., & Garg, P. (2014). Detecting and diagnosing a disease using a patient monitoring system. *International Journal of Mechanical Engineering And Information Technology*, *2*(6), 493-499.

[59] Malik, K., Raheja, N., & Garg, P. (2011). Enhanced FP-growth algorithm. *International Journal of Computational Engineering and Management*, *12*, 54-56.

[60] Garg, P., Dixit, A., & Sethi, P. (2021, May). Link Prediction Techniques for Opportunistic Networks using Machine Learning, in *Proceedings of the International Conference on Innovative Computing & Communication (ICICC)*.

[61] Garg, P., Dixit, A., & Sethi, P. (2021, April). Opportunistic networks: Protocols, applications & simulation trends. In *Proceedings of the International Conference on Innovative Computing & Communication (ICICC)*.

[62] Garg, P., Dixit, A., & Sethi, P. (2021). Performance comparison of fresh and spray & wait protocol through one simulator. *IT in Industry*, *9*(2).

[63] Malik, M., Singh, Y., Garg, P., & Gupta, S. (2020). Deep Learning in the Healthcare System. *International Journal of Grid and Distributed Computing*, *13*(2), 469-468.

[64] Gupta, M., Garg, P., Gupta, S., & Joon, R. (2020). A Novel Approach for Malicious Node Detection in Cluster-Head Gateway Switching Routing in Mobile Ad Hoc Networks. *International Journal of Future Generation Communication and Networking*, *13*(4), 99-111.

[65] Gupta, A., Garg, P., & Sonal, Y. S. (2020). Edge Detection-Based 3D Biometric System for Security of Web-Based Payment and Task Management Application. *International Journal of Grid and Distributed Computing*, *13*(1), 2064-2076.

[66] Garg, P., & Raman, P. K. (2011). Broadcasting Protocol & Routing Characteristics With Wireless Ad Hoc Networks. *Int. J. Comput. Emg. Manag*, *12*(1), 36-40.

[67] Garg, P., Arora, N., & Malik, T. (2011). Capacity Improvement of Wi-MAX in the presence of Different Codes WI-MAX: Speed & Scope of the future. *IJCEM*, *12*.

[68] Garg, P., Saroha, K., & Lochab, R. (2011). Review of wireless sensor networks: architecture and applications. IJCSMS International Journal of Computer Science & Management Studies, 11(01), 2231-5268.

[69] Yadav, S., &Garg, P. Development of a New Secure Algorithm for Encryption and Decryption of Images.

[70] Dixit, A., Sethi, P., & Garg, P. (2022). Rakshak: A Child Identification Software for Recognising Missing Children Using Machine Learning-Based Speech Clarification. International Journal of Knowledge-Based Organisations (IJKBO), 12(3), 1-15.

[71] Shukla, N., Garg, P., & Singh, M. (2022). MANET Proactive and Reactive Routing Protocols: A Comparison Study. International Journal of Knowledge-Based Organisations (IJKBO), 12(3), 1-14.

[72] Arya, A., Garg, P., Vellanki, S., Latha, M., Khan, M. A., & Chhbra, G. (2024). Optimisation Methods Based on Soft Computing for Improving Power System Stability. *Journal of Electrical Systems*, *20*(6s), 1051-1058.

[73] Garg, P. (2025). Cloud security posture management: Tools and techniques. Technix International Journal for Engineering Research, 12(3).

[74] Tyagi, P., Sharma, S., Srivastava, A., Rajput, N. K., Garg, P., & Kumari, M. (2025). AI in Healthcare: Transforming Medicine with Intelligence. In the *First Global Conference on AI Research and Emerging Developments (G-CARED 2025)*, New Delhi, India. https://doi.org/10.63169/GCARED2025.p4

[75] Garg, P., Bhatt, M., Parmar, R., & Arsalan, M. (2025). Generative AI: Evolution, Applications, Challenges, and Future Prospects. *Applications, Challenges, and Future Prospects (May 17, 2025)*.

[76] Garg, P., Saraswat, P., & Siddiqui, Z. (2025). AI & the Indian Stock Market: A Review of Applications in Investment Decision. https://doi.org/10.63169/GCARED2025.p10

[77] Garg, P., Sharma, S., Mittal, S., Tevatia, R., Tyagi, V. K., & Kapoor, S. (2025). Unlocking Workforce Potential: AI-Powered Predictive Models for Employee Performance Evaluation. https://doi.org/10.63169/GCARED2025.p21

[78] Shrivas, N., Kalia, A., Roy, R., Sharma, S., Garg, P., & Agarwal, G. (2025). OSINT: A Double-edged Sword. In the *First Global Conference on AI Research and Emerging Developments (G-CARED 2025)*, New Delhi, India. https://doi.org/10.63169/GCARED2025.p22

[79] Garg, P., Aditi, A., & Roy, B. (2025). A System of Computer Network: Based On Artificial Intelligence. https://doi.org/10.63169/GCARED2025.p24

[80] Parmar, R., Kapoor, S., Saifi, S., & Garg, P. (2025). Case Study on Intelligent Factory Systems for Improving Productivity and Capability in Industry 4.0 with Generative AI. In the *First Global Conference on AI Research and Emerging Developments (G-CARED 2025)*, New Delhi, India. https://doi.org/10.63169/GCARED2025.p28

[81] Singh, R., Sharma, R., Kumar, R., Nafis, A., Siddiqui, M. A. M., & Garg, P. (2025). Detection of Unauthorised Construction using Machine Learning: A Review. In the *First Global Conference on AI Research and Emerging Developments (G-CARED 2025)*, New Delhi, India. https://doi.org/10.63169/GCARED2025.p30

[82] Garg, P., Kapoor, S., Singh, V., Sharma, S., & Ankita, A. (2025). A Bridge between Blockchain and Decentralised Applications, Web3 and Non-Web3 Crypto Wallets. https://doi.org/10.63169/GCARED2025.p35

[83] Verma, M., Sharma, S., Garg, P., & Singh, A. (2025). The Hidden Dangers of Prototype Pollution: A Comprehensive Detection Framework. In the *First Global Conference on AI Research and Emerging Developments (G-CARED 2025)*, New Delhi, India. https://doi.org/10.63169/GCARED2025.p36

[84] Sharma, A., Sharma, S., Garg, P., & Bhardwaj, P. (2025). LockTalk: A Basic Secure Chat Application. In the *First Global Conference on AI Research and Emerging Developments (G-CARED 2025)*, New Delhi, India.

[85] Arora, K., Bawane, R., Gupta, C., Ahmed, K., & Garg, P. (2025). Detection and Prevention of Cyber Attacks and Threats using AI. In the *First Global Conference on AI Research and Emerging Developments (G-CARED 2025)*, New Delhi, India. https://doi.org/10.63169/GCARED2025.p38

[86] Garg, P., Dhruv, D., Rahman, A. A., Rai, A., Siddiqui, M., & Yadav, D. (2025). Easeviewer: An Esports Production Tool. https://doi.org/10.63169/GCARED2025.p46

[87] Garg, P., Lakshita, L., Mehwish, M., Nazia, N., & Ahmed, K. (2025). Emerging Trend in Computational Technology: Innovations, Applications, and Challenges. *Applications and Challenges (May 17, 2025)*. https://doi.org/10.63169/GCARED2025.p51

[88] Chauhan, S., Singh, M., & Garg, P. (2021). Rapid Forecasting of Pandemic Outbreak Using Machine Learning. *Enabling Healthcare 4.0 for Pandemics: A Roadmap Using AI, Machine Learning, IoT and Cognitive Technologies*, 59-73.

[89] Gupta, S., & Garg, P. (2021). An insight review on multimedia forensics technology. *Cyber Crime and Forensic Computing: Modern Principles, Practices, and Algorithms*, *11*, 27.

[90] Shrivastava, P., Agarwal, P., Sharma, K., & Garg, P. (2021). Data leakage detection in Wi-Fi networks. *Cyber Crime and Forensic Computing: Modern Principles, Practices, and Algorithms*, *11*, 215.

[91] Meenakshi, P. G., & Shrivastava, P. (2021). Machine learning for mobile malware analysis. *Cyber Crime and Forensic Computing: Modern Principles, Practices, and Algorithms*, *11*, 151.

[92] Nanwal, J., Garg, P., Sethi, P., & Dixit, A. (2021). Green IoT and Big Data: Succeeding towards Building Smart Cities. In *Green Internet of Things for Smart Cities* (pp. 83-98). CRC Press.

[93] Gupta, M., Garg, P., & Agarwal, P. (2021). Ant Colony Optimisation Technique in Soft Computational Data Research for NP-Hard Problems. In *Artificial Intelligence for a Sustainable Industry 4.0* (pp. 197-211). Springer, Cham.

[94] Magoo, C., & Garg, P. (2021). Machine Learning Adversarial Attacks: A Survey Beyond. *Machine Learning Techniques and Analytics for Cloud Security*, 271-291.

[95] Garg, P., Srivastava, A. K., Anas, A., Gupta, B., & Mishra, C. (2023). Pneumonia Detection Through X-Ray Images Using Convolution Neural Network. In *Advancements in Bio-Medical Image Processing and Authentication in Telemedicine* (pp. 201-218). IGI Global.

[96] Gupta, S., & Garg, P. (2023). 14 Code-based post-quantum cryptographic technique: digital signature. *Quantum-Safe Cryptography Algorithms and Approaches: Impacts of Quantum Computing on Cybersecurity*, 193.

[97] Prakash, A., Avasthi, S., Kumari, P., & Rawat, M. (2023). PuneetGarg 18 Modern healthcare system: unveiling the possibility of quantum computing in medical and biomedical zones. Quantum-Safe Cryptography Algorithms and Approaches: Impacts of Quantum Computing on Cybersecurity, 249.

[98] Gupta, S., & Garg, P. (2024). Mobile Edge Computing for Decentralised Systems. *Decentralised Systems and Distributed Computing*, 75-88.

[99] Gupta, M., Garg, P., & Malik, C. (2024). Ensemble learning-based analysis of perinatal disorders in women. In Artificial Intelligence and Machine Learning for Women's Health Issues (pp. 91-105). Academic Press.

[100]Malik, M., Garg, P., & Malik, C. (2024). Artificial intelligence-based prediction of health risks among women during menopause. *Artificial Intelligence and Machine Learning for Women's Health Issues*, 137-150.

[101]Garg, P. (2024). Prediction of female pregnancy complications using artificial intelligence. In *Artificial Intelligence and Machine Learning for Women's Health Issues* (pp. 17-35). Academic Press.

[102]Pokhrel, L., Arsalan, M., Rani, P., Garg, P., & Pinheiro, P. R. (2026). AI-Powered Healthcare Solutions: Bridging the Medical Gap in Underserved Communities Worldwide. In *Applied AI and Computational Intelligence in Diagnostics and Decision-Making* (pp. 57-86). IGI Global Scientific Publishing.

[103]Kapoor, S., Parmar, R., Sharma, N., Garg, P., & Singh, N. J. (2026). AI and Computational Intelligence in Healthcare: An Introductory Guide. In *Applied AI and Computational Intelligence in Diagnostics and Decision-Making* (pp. 1-26). IGI Global Scientific Publishing.

[104]Pokhrel, L., Kumar, A., Garg, P., Anand, N., & Singh, N. (2026). AI and IoT in Global Health: Ethical Lessons From Pandemic Response. In *Development and Management of Eco-Conscious IoT Medical Devices* (pp. 367-394). IGI Global Scientific Publishing.

[105]Parmar, R., Singh, A., Garg, P., Sharma, T., & Pinheiro, P. R. (2026). Blockchain for Ethical Supply Chains: Transparency in Medical IoT Manufacturing. In *Development and Management of Eco-Conscious IoT Medical Devices* (pp. 337-366). IGI Global Scientific Publishing.

[106]Gupta, S., Garg, P., Agarwal, J., Thakur, H. K., & Yadav, S. P. (2024). Federated learning-based intelligent systems to handle issues and challenges in IoVs (Part 1). https://doi.org/10.2174/9789815313031124030l

[107]Gupta, S., Chaudhary, G., & Garg, P. (2013). Modified AODV Routing Protocol through Cache Memory for Finding New Routing Paths in MANETs—International *Journal of Computer Science & Management Studies*, *13*(3).

[108]Gupta, A., & Garg, P. (2021). Emerging Techniques for Handling Pandemic Challenges. *Enabling Healthcare 4.0 for Pandemics: A Roadmap Using AI, Machine Learning, IoT and Cognitive Technologies*, 189-209.

[109]Chaudhary, A. P., Mishra, A., Kumar, D., & Garg, P. (2023, April). Human Emotion Recognition using Deep Learning. In the *2023 International Conference on Computational Intelligence, Communication Technology and Networking (CICTN)* (pp. 191-197). IEEE.

[110]Nagpal, S., Garg, P., Gaba, S., & Aggarwal, A. (2023). 13 An improved genetic quantum cryptography model for network communication. *Quantum-Safe Cryptography Algorithms and Approaches: Impacts of Quantum Computing on Cybersecurity*, 177.

[111]Yadav, M., Swami, V., Kumar, N., & Garg, P. (2025). Comparative study of Repairable Juice Plants using RPGT. *Reliability: Theory & Applications*, *20*(2 (84)), 776-783.

[112]Gupta, A., Garg, P., & Yadav, P. (2025). Role of Generative AI Towards Education and Learning: Present & Future. *TPM–Testing, Psychometrics, Methodology in Applied Psychology*, *32*(S6 (2025): Posted 15 Sept), 1059-1076.

[113]Dalal, P., Beniwal, G., Sharma, V., Garg, P., & Ahmed, K. (2025). Predicting Student Motivation and Engagement through Machine Learning Models. *TPM–Testing, Psychometrics, Methodology in Applied Psychology*, *32*(S7 (2025): Posted 10 October), 393-411.

[114]Gupta, A., Mund, A., Roy, S., Garg, P., & Yadav, D. K. (2025). Trust in AI Systems: A Social-psychological Investigation of Human–AI Collaboration. *TPM–Testing, Psychometrics, Methodology in Applied Psychology*, *32*(S7 (2025): Posted 10 October), 428-446.

[115]Bhardwaj, A., Das, A., Garg, P., & Yadav, S. (2025). Material-Driven Performance Analysis of a Vertical Nanowire Tunnel FET for Analogue Applications: Bhardwaj, Das, Garg, and Yadav. *Journal of Electronic Materials*, 1-12.

[116]Dalal, P., Sharma, B., Sharma, T., Garg, P., & Ahmed, K. (2025). Explainable AI for Understanding Human Decision-Making Patterns. *TPM–Testing, Psychometrics, Methodology in Applied Psychology*, *32*(S7 (2025): Posted 10 October), 412-427.

[117]Sharma, K. K., Verma, P. K., Garg, P., & Shrotriya, V. K. (2025, October). Predicting costs and benefits of IoT-based energy management for optimising sustainable energy storage in rural areas. In *AIP Conference Proceedings* (Vol. 3343, No. 1, p. 040017). AIP Publishing LLC.

[118]Ahmed, K., Baranwal, A., Sharma, N., Garg, P., & Singh, N. (2026). The Role of Federated Learning in AI-Powered Integrated Healthcare Solutions. In *Enabling Collaborative Health Intelligence With Federated Learning* (pp. 421-448). IGI Global Scientific Publishing.

[119]Gupta, S., Garg, P., Agarwal, J., Thakur, H. K., & Yadav, S. P. (2025). Federated learning-based intelligent systems to handle issues and challenges in IoVs (Part 2). Bentham Science Publishers. https://doi.org/10.2174/9789815322241250301

[120]Garg, P., Pranav, S., & Prerna, A. (2021). Green internet of things (G-IoT): A solution for sustainable technological development. In *Green Internet of Things for Smart Cities* (pp. 23-46). CRC Press.

[121]Malik, A., Nandal, D., Gupta, V., Garg, P., & Nandal, V. INTELLIGENT SYSTEMS AND APPLICATIONS IN ENGINEERING.

[122]Gupta, S., Garg, P., Agarwal, J., Thakur, H. K., & Yadav, S. P. (Eds.). (2025). Federated learning-based intelligent systems to handle issues and challenges in IoVs (Part 2).

[123]Garg, P., Bhatt, M., Parmar, R., & Arsalan, M. (2025). Generative AI: Evolution, Applications, Challenges, and Future Prospects. *Applications, Challenges, and Future Prospects (May 17, 2025)*.

[124]Kumar, N., Kumar, Y., Khurana, D., Kumar, S., & Garg, P. (2025, November). A Hybrid Ensemble Learning Framework for Interpretable Student Performance Prediction Using Academic and Extracurricular Factors. In *2025 International Conference on Innovations and Emerging Technologies in AI & Communication Systems (IETACS)* (pp. 666-672). IEEE.

[125]Khurana, D., Kumar, Y., Kumar, N., Kumar, S., & Garg, P. (2025, November). Transformer-Based Movie Recommendation System with Autoencoder-Enhanced Feature Compression. In *2025 International Conference on Innovations and Emerging Technologies in AI & Communication Systems (IETACS)* (pp. 685-690). IEEE.

[126]Garg, P. (2025, November). Comparative Analysis of Various Neural Networks for Galaxy Classification. In *2025 International Conference on Innovations and Emerging Technologies in AI & Communication Systems (IETACS)* (pp. 697-701). IEEE.

[127]Saggu, A. K., Babbar, N., & Garg, P. (2025, November). Health-Guard AI: Integrated Health Report Management and Analysis. In *2025 International Conference on Innovations and Emerging Technologies in AI & Communication Systems (IETACS)* (pp. 614-623). IEEE.

[128]Kumar, S., Kumar, Y., Kumar, N., Khurana, D., & Garg, P. (2025, November). Hybrid FCM-DNN Model for Uncertainty-Aware Air Quality Classification Using Multi-Pollutant Data. In *2025 International Conference on Innovations and Emerging Technologies in AI & Communication Systems (IETACS)* (pp. 679-684). IEEE.

[129]Babbar, N., Singh, H. V., Bendale, S., & Garg, P. (2025, November). Stock Market Price Prediction Using Big Data Analysis: A Performance Evaluation Study. In *2025, the 3rd International Conference on Computational Intelligence and Network Systems (CINS)* (pp. 1-6). IEEE.

[130]Singh, A. K., Kori, G., Garg, P., & Srivastava, G. (2025, November). Bank Churn Prediction Using Machine Learning. In *2025, IEEE 7th International Conference on Computing, Communication and Automation (ICCCA)* (pp. 1-6). IEEE.

[131]Bhardwaj, A., Das, A., Garg, P., & Yadav, S. (2026). Material-Driven Performance Analysis of a Vertical Nanowire Tunnel FET for Analogue Applications. *Journal of Electronic Materials*, *55*(1), 1099-1110.

[132]Srivastava, A. K., Shankdhar, D., Ror, R., & Garg, P. (2026). Harnessing YOLOv5 for real-time object detection: A cloud-based approach. In *Recent Advances in Computational Methods in Science and Technology* (pp. 441-450). CRC Press.

[133]Srivastava, A. K., Shukla, A., Gupta, H., Saxena, K., & Garg, P. (2026). Towards an intelligent attendance management system with face recognition using the LBPH algorithm. In *Recent Advances in Computational Methods in Science and Technology* (pp. 8-15). CRC Press.

[134]Srivastava, A. K., Garg, P., & Pandey, H. (2026). Vedcure: Towards intelligent ayurvedic drug recommendation and disease prediction. In *Recent Advances in Computational Methods in Science and Technology* (pp. 16-23). CRC Press.

[135]Upadhyay, D., Garg, P., & Babbar, N. (2026). A blockchain- and IoT-based smart contract framework for efficient and secure product life management. *Discover Internet of Things*.

[136]Singh, A., Parmar, R., Bhardwaj, P., Sharma, V., & Garg, P. (2026). Fusion of Aerial Networks with Advanced Computing Paradigms. *Edge Computing and Aerial Platforms*, 355-367.

[137]Kumari, M., Baranwal, A., Sonal, & Garg, P. (2026). Application of Aerial Edge Computing in Disaster Management. *Edge Computing and Aerial Platforms*, 103-122.

[138]Aditi, Saraswat, P., Sharma, V., & Garg, P. (2026). Advances in Aerial Platforms and Edge Computing. *Edge Computing and Aerial Platforms*, 123-143.

[139]Garg, P., Arora, K., Bawane, R., Gupta, C., & Ahmed, K. (2025). Detection and Prevention of Cyber Attacks and Threats using AI.

[140]Ahmed, K., Ahmed, A., Khan, J., Garg, P., Seth, S., & Mallik, S. (2025). Principal Component Analysis-Based Clustering of Insecticides and Molecular Docking of Pyrethroid Insecticides.

[141]Kumar, B., Kumar, A., Nanwal, J., Garg, P., & Patnaik, P. (2025, November). Ensemble of YOLOv5 and Segment Anything Model for Brain Tumour Detection. In *2025, the 2nd International Conference on Advanced Computing and Emerging Technologies (ACET)* (pp. 1-5). IEEE.

[142]Arsalan, M., Anas, M., & Garg, P. (2025). Transparent AI for Drug Discovery and Development. *Available at SSRN 5844242*.

[143]Singh, A., Bhardwaj, P., Garg, P., & Singh, N. (2026). Introduction to explainable artificial intelligence in healthcare. In *Explainable AI in Clinical Practice* (pp. 23-44). Academic Press.

[144]Kapoor, S., Singh, A., Garg, P., & Ramasamy, L. K. (2026). Explainable artificial intelligence in a diagnostic support system. In *Explainable AI in Clinical Practice* (pp. 131-145). Academic Press.

[145]Ahmed, K., Anas, M., & Garg, P. (2026). Case studies on unlocking the potential of Industry 4.0 for sustainable manufacturing through generative AI-driven innovations. *Available at SSRN 6356958*.

[146]Garg, P., & Oruganti, S. K. (2026, March). AI Assisted Routing Optimisation in Opportunistic IoT Networks using Machine Learning: A Comprehensive Review on Protocols & Simulators. In *Sustainable Global Societies Initiative* (Vol. 1, No. 4). Vibrasphere Technologies.

[147]Arsalan, M., Pokhrel, L., & Garg, P. (2026). Architecture, Components, and tools in Integrated AI-Augmented Intelligence: A design perspective. *Components and tools in Integrated AI-Augmented Intelligence: A design perspective (March 19, 2026)*.

[148]Singh, H., Ahmed, K., & Garg, P. (2026). Human Versus Machine Customer Behaviour and Functional Differences. *Available at SSRN 6441098*.

[149]Saraswat, P., & Garg, P. (2026). Soft Computing In AI Agents.

[150]Saraswat, P., & Garg, P. (2026). Water Quality Prediction Using IOT Sensors and Deep Networks.