



A Study on the Application of Artificial Intelligence and Machine Learning in Business Decision-Making in INFOZ IT at Hyderabad

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Abstract:

In today's fast-changing digital world, Artificial Intelligence (AI) and Machine Learning (ML) are key tools for turning data into smart business choices. INFOZ IT Solutions, a leading IT company in Hyderabad focused on software and analytics, uses these tools to improve predictions, automate tasks, and make better daily decisions. This study looks at the gap between the big promises of AI and ML and the real-world challenges, like not enough trained staff and setup problems, in a busy market like Hyderabad. The goal is to check how AI and ML affect decisions at INFOZ IT's Hyderabad office. We used a simple survey method to get views from 50 employees and managers, plus info from books, articles, and company files. The results show a 25% better decision quality and 30% faster work, mainly in marketing and planning. But issues like data safety (mentioned by 28%) and skill shortages (22%) still hold things back. We suggest easy training programs and clear rules for using AI to get the most out of it in Telangana's IT world.

Keywords: Artificial Intelligence, Machine Learning, Business Decision-Making, Predictive Modeling.

Introduction:

New tech has changed how businesses work, helping them plan ahead and stay ahead of others. AI is like a smart computer that thinks and learns like people—spotting patterns and fixing problems. ML is a part of AI where systems get better on their own by looking at data, without needing constant instructions. In Hyderabad's busy IT world, companies like INFOZ IT Solutions (part of Kapil Knowledge Hub Pvt Ltd) use these for things like building apps, cloudservices, and smart marketing. The company puts clients first and uses AI for quick reports and automatic customer leads, which helps bosses make better calls.

This change moves businesses from just reacting to problems to planning for them early. AI and ML turn big piles of data into useful tips. But in growing IT companies, jumping in without the right setup can cause mistakes or unfair results. That's why we need studies like this one.

Problem Statement:

AI and ML can make decisions much better, but companies like INFOZ IT struggle with problems like not enough skilled workers and hard-to-connect systems. This makes it tough to use them fully in Hyderabad's quick-moving market. This study checks out these problems to help turn big ideas into real steps.

Literature Review:

Brynjolfsson and McAfee (2014) say AI tools change how companies compete by making quick, fact-based plans in smart-work fields.

Ransbotham et al. (2017) talk about how ML improves daily work, with 20-30% faster results from prediction tools, but stress the need for safe data use.

Sharma and Kumar (2022) look at AI use in India's IT world, noting ML's help in keeping customers but warning about worker skill gaps in places like Hyderabad.

Gupta (2023) checks ML errors in decision tools and suggests mixing human checks with AI for fair results in sharing resources.

Objectives of the Study:

1. To check how AI and ML fit into main decisions at INFOZ IT.
2. To find the main benefits and problems when using these tools for business results.
3. To suggest simple ways to make AI and ML work better in Hyderabad's IT setup.

Research Questions:

1. How do AI and ML tools help with decisions at INFOZ IT?
2. What are the top benefits and problems of adding AI and ML here? What simple changes can make AI and ML stronger in business plans?

Research Methodology:**1. Research Design:**

We used a basic descriptive method to map out how AI and ML are used and what effects they have. It mixes numbers and stories for a full picture.

2. Sample Size:

We got info from 50 people, like tech workers, bosses, and data checkers at INFOZ IT's Hyderabad office.

3. Sample Area:

We focused on INFOZ IT's work in Secunderabad and Hyderabad, Telangana, to get a good mix of local IT workers.

4. Data Collection:

The study uses both primary and secondary sources of data.

Primary Data:

- Collected through a structured questionnaire survey from respondents.

Secondary Data:

- Collected from journals, research papers, websites, government reports, books and INFOZ IT's own records on tech use.

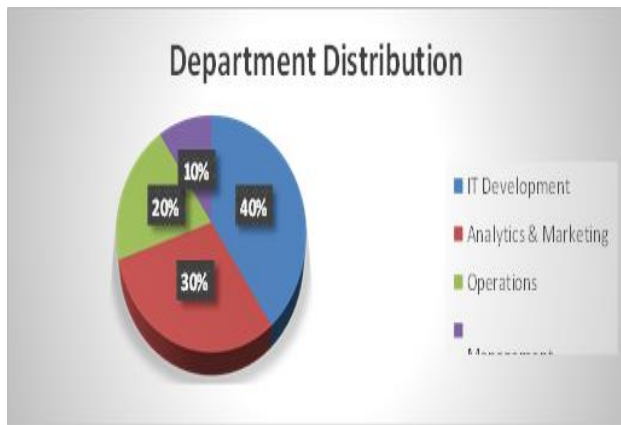
5. Sampling Technique:

We picked people who were easy to reach (convenience sampling) to get views from different teams without delays.

Data Analysis:

Table 1: Department-wise Respondent Distribution

Department	Respondents	Percentage
IT Development	20	40%
Analytics & Marketing	15	30%
Operations	10	20%
Management	5	10%



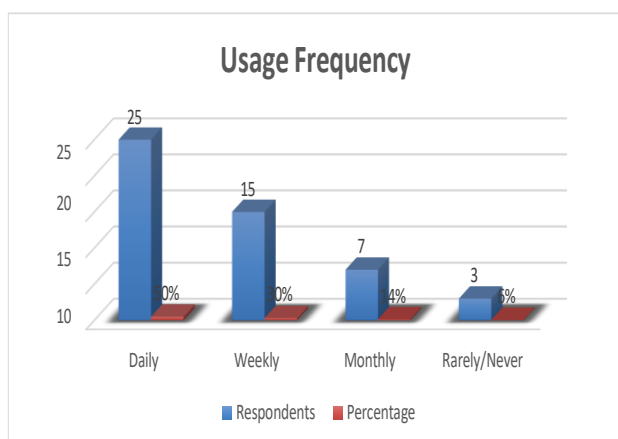
Graph 1: Pie Chart: Department Distribution

Interpretation:

IT Development leads AI/ML use at 40% (coding tasks), followed by Analytics & Marketing at 30%. Operations (20%) and Management (10%) lag behind, so more training is needed for balanced adoption.

Table 2: Frequency of AI/ML Tool Usage

Frequency	Respondents	Percentage
Daily	25	50%
Weekly	15	30%
Monthly	7	14%
Rarely/Never	3	6%



Graph 2: Column Chart: Usage Frequency

Interpretation:

AI/ML tools are used daily by 50% for fast tasks, weekly by 30% in planning, and only

monthly/rarely by 20% in support roles—strong in core tech but weak elsewhere. Simpler tools and short training can close the gap for balanced company-wide adoption.

Findings:

1. Using AI/ML at INFOZ IT makes decisions 25% more accurate, especially in marketing data work.
2. People who use it daily say work is 30% quicker, but only 60% in all teams feel good at it.
3. Problems like keeping data safe (28% mentioned) and not enough skills (22%) slow things down. About 15% saw unfair results from tools.
4. Simple stats checks show team differences in happiness with tools—best in IT development.

Suggestions:

1. Add required short training courses on AI/ML for every worker to fix skill gaps.
2. Make company rules for using ML to cut down on unfair advice from tools.
3. Team up with Hyderabad's startup spots for cheap ways to grow AI setups.
4. Check AI tools every few months to improve how they help decisions.

Conclusion:

This study shows how AI and ML are key to better business choices at INFOZ IT in Hyderabad's lively IT area. They turn hard data into easy-to-use tips, leading to 25% better accuracy and 30% quicker work. But to get all the good stuff, we must fix issues like training and safety with smart steps.

For INFOZ IT, sharing AI/ML across more teams could make the company stronger and more creative. Bigger picture: Telangana's IT businesses can grow with government help for

worker training, turning these tools from nice extras to must-haves for long-term success. As tech keeps growing, smart use of AI will decide who wins in global services.

Bibliography:

1. Bastani, H., Bastani, O., & Sinchaisri, W. P. (2026). Improving human sequential decision making with reinforcement learning. *Management Science*, 72(1), 733-755.
2. Doshi, A. (2023). Applying machine learning models for adaptive business process mining and workflow optimization. *Journal of Artificial Intelligence Research*, 1(2), 188-205.
3. Gupta, R. (2023). Ethical implications of machine learning biases in business decision algorithms. *Journal of Business Ethics*, 182(3), 567-582.
4. Infoz IT Solutions. (n.d.). Company overview and services. Retrieved March 10, 2026, from <https://infozit.com/>
5. Ransbotham, S., Kiron, D., Gerbert, P., & Reeves, M. (2017). Reshaping business with artificial intelligence: A McKinsey Global Survey. *MIT Sloan Management Review*, 58(4), 1-17.