EMERGING AREAS OF MANAGEMENT UNDER ARTIFICIAL INTELLIGENCE

Prakashitha.J[1] and Dr. Nithya Kala[2]

1. Working Professional – BNP Paribas
2. Assistant Professor – Department of Business Administration,
PSGR Krishnammal College for Women, Coimbatore

Abstract: *AI supports management in crunching numbers, identifying patterns and make faster data driven decisions. AI has been an indispensable tool for a manager who is looking for some quantitative support in their decision making. One the most forward facing activities of AI is setting OKR's. AI ensures OKR focus on creating basic clarity and alignment on measuring term results. AI also provides teams the insight to set OKR's that optimize their impact in the quarter, team dynamics by giving more timely feedback to team members and improving team accountability. Chat bots and NLP as a part AI was able to move a step ahead, assist the management in identifying where there is a need for positive feedback, and facilitate the training requirements. This paper deals with Chat bots, NLP in AI,setting up OKR's, Role of AI in transforming Management.*

Key Words: Artificial Intelligence, Objective and Key Roles, Feedback, Training needs

1. INTRODUCTION TO AI:

1.1 MEANING OF ARTIFICIAL INTELLIGENCE

Artificial Intelligence refers to the simulation of human intelligence in machines that are lined-up to think like humans and mimic their actions. Additionally the term also explains machine exhibits traits associated with a human mind such as learning and problem solving. The tendency of a computer or computer-controlled robot to perform tasks are commonly related to Artificial Intelligence. The ideal characteristics of artificial intelligence is its ability to defend and take gestures that have the best chance of achieving a distinct goal. Algorithms. using proficiencies such as machine learning, deep learning and rules, power these systems, Machine learning algorithms feed computer data to All systems, using statistical techniques to enable AI systems to learn. Through machine learning, AI systems are forward thinking at tasks, without having to be specifically programmed to do so. These AI also helps in radiating enthusiasm and skepticism collectively. Statistics of AI confirms:

✓ AI technology can increase business productivity by up to 40 percent (Accenture)

✓ The number of AI startups since 2000 has magnified to 14 times. (Forbes)

✓ AI will automate 16% of American jobs (Forrester)

✓ 15 percent of enterprises are using AI, and 31 percent of them say that it is their agenda for the next 12 months (Adobe)

1.2 CLASSIFICATION OF AI:

AI technologies have transfigured the potential of businesses globally. sanctioning humans to automate formerly time-consuming tasks, and gain untapped insights into their data through rapid pattern recognition. AI technologies are labeled by their acceptance to mimic human characteristics, the technology they use to do this, their real-world applications, and the theory of mind, which we will discuss in more depth below. Al technologies are classified by their capacity to imitate human characteristics, the technology they use to perform

an activity and the theory of mind. All artificial intelligence systems which might be real and hypothetical can fall into one of three types below:

Artificial Narrow Intelligence (ANI) also referred to as weak AI or narrow AI. is one such type of artificial intelligence where we can successfully realize the date. These ANI's are goal oriented and are designed to perform single task - i.e facial recognition, speech recognition/voice assistants, driving a car, or searching the internet - and is very intelligent at completing the specific task it is programmed to do they operate under a narrow set of constraints and limitations, which is why this type is commonly referred to as weak AI. Narrow AI doesn't imitate or replicate human intelligence. It merely replicates human behavior based on a narrow range of parameters and contexts. Narrow AI can either be reactive, or have a limited memory Limited memory AI is more advanced, equipped with data storage and learning capabilities that enable machines to use historical data to inform decisions.

Artificial General Intelligence (AGI) also referred to as strong AI or deep AI, is the concept of a machine with general intelligence that mimics human intelligence and/or behaviors, with the capacity to learn and apply its intelligence to solve any problem. AGI can think, understand, and act in a way that is indistinguishable from that of a human in any given situation. Machines would have to take experiential learning to the next level, not just improving efficiency on singular tasks, but gaining the ability to apply experiential knowledge to a wider range of different problems. Strong Al uses a theory of mind AI framework, which refers to the potential to discern needs, emotions, beliefs and thought processes of other intelligent entitles. Theory of mind level AI is not about replication or simulation, it's about equipping machines to truly understand humans.

Artificial Super Intelligence (ASI): is the hypothetical AI that doesn't just mimic or understand human intelligence and behavior. The concept of artificial super intelligence sees Al evolve to be so akin to human emotions and experiences, that it doesn't just understand them. it evokes emotions, needs, beliefs and desires of its own. In addition to replicating the multi faceted intelligence of human beings. ASI would theoretically be immensely better at everything we do; math, science, sports, art. medicine, hobbies, emotional relationships. ASI would have a greater memory and a faster capability to process and analyze data and stimuli. Consequently, the decision-making and problem solving potentiality of super intelligent beings would be far better than those of human beings.

2. CHAT BOTS:

A chatbot is an artificial intelligence (AI) software that can helps in initiating an effective communication (or a chat) with a user in natural language via messaging applications, online applicaiton, mobile apps or through the telephone. These are also known as also known as "conversational agents" and often described as one of the most advanced and promising expressions of interaction between humans and machines. However, from a technological point of view, a chatbot only represents the natural evolution of an issue Answering system leveraging NLP. Formulating responses to questions in natural language is one of the most typical Examples of Natural Language Processing applied in various enterprises' end-use applications.

There is strong evidence that chatbot adoption leads to significant cost savings for enterprises. According to IBM research, businesses spend $1.3 trillion on 265 billion customer service calls each year Chatbots, IBM estimates, can successfully answer up to 80% of routine questions. Costs are far lower as a chatbot can address thousands of queries at once, whereas humans are limited to one query at a time. Further, chatbots ensure that the human support team is not overloaded, because common requests are addressed and filtered before human intervention. The efficiencies and cost savings can be monumental.

In a paper published in the Proceedings of the 4th International Conference on Intern www Science, authors Petter Bae Brandtzaeg and AsbjørnFølstad found the following:

Of the 68% of respondents who used chatbots for productivity, 42% cited ease use, speed, and convenience as their reasons for using chatbots. 41% use chatbots to obtain help and information faster, often instead performing a search.

Interestingly, 5% said they preferred to interact with a chatbot than a person because of reduced

waiting time, and another 5% preferred chatbots to humans because they feel they were less intimidating and weren't worried about feeling stupid asking important questions.

2.1 FRAMEWORK OF A CHAT BOT:

Chatbots process the text presented to them by the user (a process known as "parsing"), before responding according to a complex series of algorithms that interprets and identifies what the user said, infers what they mean and/or want, and determine a series of relevant responses based on the data. Some chatbots offer a remarkably authentic conversational experience, in which it's very difficult to determine whether the agent is a bot or a human being. There are two different tasks at the key of a chatbots;

User request analysis: this is the first task that a chatbot performs. It analyzes the user request to spot the user intent and to extract relevant entities. The potential to identify the user's intent and extract data and relevant entities present in the user's request is the first condition and the most relevant step at the core of a chatbot: If you are not able to correctly understand the user's request, you won't be able to provide the correct answer.

Returning the response: once the user's intent has been identified, the chatbot must provide the most appropriate response for the user's request. The answer may be:

- ❖ a generic and predefined text
- ❖ a text retrieved from a knowledge base that contains different answers
- ❖ a contextualized piece of information based on data the user has provided
- ❖ data stored in enterprise systems
- ❖ the result of an action

that the chatbot performed by interacting with one or more backend application

- ❖ a disambiguating question that helps the chatbot to correctly understand the user's request

2.2 ROLE OF CHAT BOATS IN BUSINESS:

Scale up your operations: Chatbots do not suffer from the limitations of a human agent. In live agents can handle only 2 to 3 conversations at a time, chatbots can operate without an upper limit. By on boarding chatbot solutions to complement human task force business can get the boost it needs to enter new markets.

Query handling: Business get many queries from your customers. If your business receives many inquiries, chatbots can take the load off customer support team. By standing in as the first point of contact, they can screen calls from customers and redirect them to human agents only when required.

Provide right products or services to customers: If you are selling goods and services which are near substitutes for each other, your customers may need help in selecting the right product. Customers seek advice at the time of buying expensive things, such as smartphones, camera accessories, etc. Chatbots can guide the customers in getting the right product or service.

Effective handling of millennials: Millennials are not impulsive buyers. They show interest in enquiring and compare products before they buy. In addition, millennials prefer live chat over phone calls. Therefore, if your product lines aim at Millennials, introducing chatbots in your customer service will be a prudent investment.

Content marketing via online channels: The more you interact with your customer the more business you get from them. If you are using online channels to communicate with customers, then chatbots can be useful in simplifying certain tasks for you.

Provides an interactive marketing platform: Unlike apps and websites, chatbots data present a passive user experience. You can use chatbots for a highly interactive market campaign. And the availability of chatbots on platforms like Facebook Messenger means you reach out to more people at once.

You need to drive up organizational efficiency: If you are burning too many resources in backend

support, chatbots can be your way out. Instead of employing more people mundane and repetitive tasks, install a chatbot business solution and automate everything.

Prompt Responses: Customers simply do not like to wait for assistance — any ideal time can lead to frustration and potential churn. These Chatbots are a smarter way to ensure that customers receive the instant response that they demand.

Scalability: Unlike live support partners who can handle 2 to 3 conversations at the same time, chatbots can simultaneously and efficiently manage thousands of conversations. These chat bots also ensure all the customer responses are addressed immediately.

3. NEURO LINGUISTIC PROGRAMMING

3.1 WHAT IS NLP?

Neuro-linguistic programming (NLP) is a psychological approach that calls for evaluating strategies used by victorious individuals and helps in implementing them to reach a personal goal. It relates thoughts, language, and patterns of behavior learned through experience to specific outcome. Supporters of NLP assume all human action is positive. Therefore, if a plan fails or unexpected happens, the experience is neither good nor bad-it simply presents more use information. It is a psychotherapy created by Richard Bandler and John Grinder in California, United States, in the early 1970s. And there is a connection between neurological processes (linguistic) and behavioral patterns observed through experience (programming), these can be acting as a path in achieving specific goals in life.

3.2 COMPONENTS ON NLP:

Entity extraction: Entity extraction involves segmenting a sentence to identify a extract entities, such as a person (real or fictional), organization. geographies, events, etc. NE APIs use online data from sources like Wikipedia or other repositories to match these entitic One of the main challenges is to match different variations of an entity and cluster it as the same.

Syntactic analysis: Syntax refers to the proper ordering of words. It deals with th structural roles of words in the sentence. Later a parsing algorithm is used to produce a "tree which gives you the syntactic relationships between the constituents according to context-free grammar.

Semantic Analysis: Semantic analysis describes the process of understanding natural language–the way that humans communicate–based on meaning and context. The semantic analysis of natural language content is initiated by understanding all of the words in content to capture the real context of any text. In the initial stages it reads the text elements and assigns them to their logical and grammatical role. It analyzes context in the adjoining text and it inspect the text structure to accurately disambiguate the proper meaning of words that have more than one definition.

Sentiment Analysis: Once the syntactic and semantic analysis has been completed, we try to understand the sentiment behind every sentence. Sentiment will include emotions, opinions, and attitudes. We are talking subjective impressions and not facts. This is also termed as an opinion mining method which is a powerful tool in social media.

Pragmatic analysis: Most of the time, due to flexibility of the natural language complexities arises in interpreting the meaning of an isolated statement. Pragmatic analysis use the context of utterance—when, why, by who, where, to whom something was said. It deals wit intentions like criticize, inform, promise, request, and so on.

4. OBJECTIVE AND KEY RESULTS:

The acronym OKR stands for Objectives and Key Results, a well known goal management technique that helps business implement their strategy. Implementation of the OKR frameworks include improved focus, increased transparency, and better alignment. Each OKR has an Initiative, which describe the work required to drive progress on the Key Results. OKR achieves this by organization employees and the work they do around achieving common objectives. An OKR consists of an Objective, which defines a pre determined goal to be achieved, and a minimum of 5 Key Results, which measure progress towards the Objective.

4.1 WHY DO WE NEED OKR?

The main purpose of defining OKRs is to create alignment around measurable goals and every build block of OKR contributes to this purpose in a different way.

Objectives and Key Results defines clear direction and enables a continuous progress checking.

Missions are inspiring and agreed upon beforehand. Goals are no longer ambiguous because they are all measurable key results.

Everyone can have the same understanding of our progress so far. Increase in the number of daily active users implies a business is moving closer to a successful launch. Rather if the number goes down instead, one possible way is to can review the assumptions, hypothesis, plans, or actions to see if there are other things we can do.

Plans are defined and executed by the same people.

OKR frees both managers and managees from micro-managing.

In general a manager knows more about higher level stuffs like strategies, missions, and visions. This immensely helps them in choosing the path where they need to focus on and defines what would be the desired results a team needs to achieve by defining better OKRs.

Managee knows more about lower level (but not less important) stuffs like technologies, implementations, and constraints. So they can come up with plans that match the reality the most. These plans are more effective, efficient and creative than what managers imagine.

Note that doesn't mean only Managers define Objectives or Key Results, nor only managees defines the course of plan. OKRs are defined by all team members together. The course of Action can be from top down (Manager -> Managee, Objective -> Key Results -> Plan) or vice versa.

We have limited resources (human power, time, money), so we have to spend them at the right places. Being able to put things in Future can help us spend our resources wisely and get better results.

4.2 PROCESS OF OKR

OKR is a methodology that helps align the company strategy to its goals and people and also ensure the whole organisation is focused on achieving the same goals.

Set your Objectives: As you begin setting your first OKRs start by defining one Objective for your company. As the business gets more comfortable using OKRs, you can add more company Objectives, but you will never want more than 5. Communicate and explain this Objective to your functional teams (for example, Product Development, Marketing, Sales, etc) and ask the teams to set their contributing Objectives to be aligned with the company's Objective. Each team should think about how they can help move forward the company goals. Remember, Objectives should be ambitious, qualitative, time bound, and actionable.

Define your Key Results: Under each team there are 3 to 4 which defines the measurable Key Results. The job of Key Results is to measure how close you're getting to achieving your Team Objective. The company Objectives don't need Key Results because those goals will be moved forward by team OKRs.Measurable Key Results can be set in a different ways:

- ✓ Increase _____ from X to Y
- ✓ Reduce _____ by X%
- ✓ Improve _____ up to X%

By moving the needle on Key Results, you're driving the Objective forward. Key Results are generally based on the growth, performance, revenue, or engagement.

Update your OKRs: While you should set team OKRs quarterly, it is important to go over your OKRs every week. This way you can make sure you stay on track with your goals and provide and give feedback to team members as necessary.

Plan your activities: It is also important to incorporate OKRs into your weekly activities. A weekly review about the upcoming projects and plans is required to achieve those Objectives and

write them out. This way you can see how all your efforts help you achieve your goals.

Review your OKRs: At the end of the quarter each Team should then look back at the accomplishment of their OKRs. See what you did well and what you can improve on. From there you can start planning your team's next OKRs. Companywide, you should have an OKR review 2-3 times a quarter to share thoughts and learning. If you need an overview of how to get started with OKR using Weekdone, be sure to check out our Learning Center.

5. ROLE OF AI INTO MANAGEMENT:

Artificial intelligence is plays the role of humans in business behind the scenes. This implies AI can be rolled out to handle, manage, or assist with regular aspects and functions of the business. Use of artificial intelligence in business helps them manage huge information and can be a huge benefit. AI algorithms are already helping more businesses manage their data through deep analysis and plenty of specific industries are already benefitting from AI in their operations.

Logistics: Companies that use freight trucks or flights have found that using AI processes helps to determine efficient travel patterns based on the AI ability to source information from multiple places which might include the weather, average fuel consumption, traffic, and other elements.

Healthcare: Some healthcare organizations are using AI to supplement physician training and education. Plus, AI has already been used in the healthcare industry to help review medical records and evaluate treatment approaches, like a digital assistant for doctors.

HR and staffing: Human resource departments and staffing agencies are using AI technologies to help them find the best talent from resume submissions. AI can match the best applicants with the job positions based on keyword functionality and AI's ability to gather and analyze information from several sources co-currently.

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