



A.V.C COLLEGE OF ENGINEERING, MANNAMPANDAL
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



“FORCE (FORum of Computer science and Engineers’) Newsletter”

Volume: 8

Month: Aug’2021

Issue: 01

HOD’S DESK

I appreciate the final years (2021 batch) who were participated in the National / International Conferences held at various Institutions. Also I congratulate the students those who got offer letters at various companies. I appreciate Samyuktha.G, Durgadevi.V, Ramiya.R, Meiyammai.V for completing one month research internship at SSN Engineering College. I wish you all success in this new academic session.

"Plan well before you start the journey in every walks of Life

Remember the Carpenter & Tailor’s rules

Measure Twice, But cut once"

Dr.S.Padmapriya, HOD/CSE

COGNITIVE COMPUTING (CC)

Mrs.R.VINOTHINI, AP/CSE

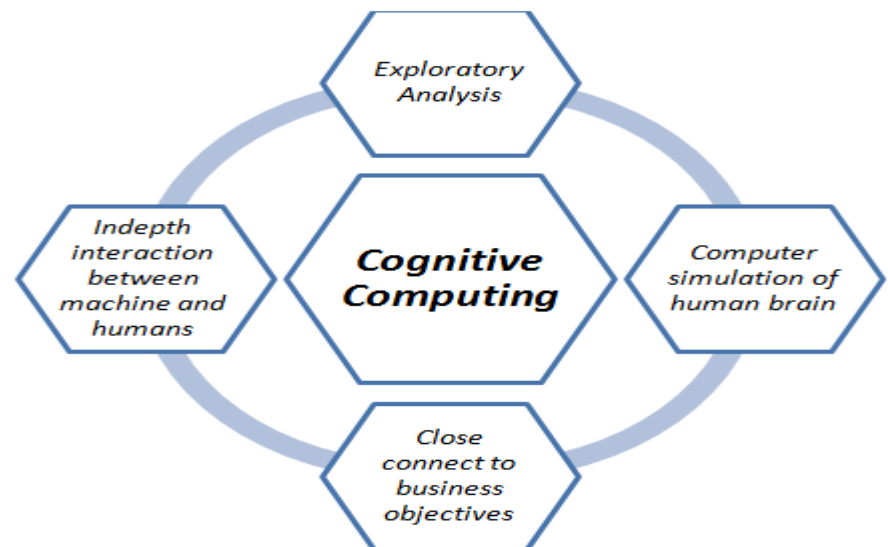
Introduction:

Cognitive computing refers to the use of reasoning, language processing, machine learning, and human capabilities that help regular computing better solve problems and analyze data. By learning patterns and behaviors and becoming more intelligent, a computer system can tackle complex decision-making processes. Cognitive computing is the use of computerized models to simulate the human thought process in complex situations where the answers may be ambiguous and uncertain. The phrase is closely associated with IBM's cognitive computer system, Watson. Cognitive computing overlaps with AI and involves many of the same underlying technologies to power cognitive applications, including expert systems, neural networks, robotics and virtual reality (VR).

How cognitive computing works

Cognitive computing systems can synthesize data from various information sources, while weighing context and conflicting evidence to suggest the best possible answers. To achieve this, cognitive systems include self-learning technologies that use data mining, pattern recognition and natural language processing (NLP) to mimic the way the human brain works.

Fig.No.1 Diagram for Cognitive Computing



Some features that cognitive systems may express are:

Adaptive

They may learn as information changes and as goals and requirements evolve. They may resolve ambiguity and tolerate unpredictability. They may be engineered to feed on dynamic data in real time, or near real time.[11]

Interactive

They may interact easily with users so that those users can define their needs comfortably. They may also interact with other processors, devices, and cloud services, as well as with people.

Iterative and Stateful

They may aid in defining a problem by asking questions or finding additional source input if a problem statement is ambiguous or incomplete. They may "remember" previous interactions in a process and return information that is suitable for the specific application at that point in time.

Contextual

They may understand, identify, and extract contextual elements such as meaning, syntax, time, location, appropriate domain, regulations, user's profile, process, task and goal. They may draw on multiple sources of information, including both structured and unstructured digital information, as well as sensory inputs (visual, gestural, auditory, or sensor-provided).

Cognitive Analytics

Cognitive computing-branded technology platforms typically specialize in the processing and analysis of large, unstructured datasets.[13]

Other characteristics of a cognitive analytics system include:

- **Adaptability:** cognitive analytics systems can use machine learning to adapt to different contexts with minimal human supervision
- **Natural language interaction:** cognitive analytics systems can be equipped with a chatbot or search assistant that understands queries, explains data insights and interacts with humans in natural language.

HYPERAUTOMATION TECHNOLOGY

Student Corner

M.SIVASANKAR, III CSE

Introduction:

Hyperautomation is a business-driven, disciplined approach that organizations use to rapidly identify, vet and automate as many business and IT processes as possible. Hyperautomation is a term initiated by Gartner. It is the application of automation technologies like RPA and process mining along with machine learning and other emerging technologies to increase the level of automation and digital transformation in companies.

Based on all the definitions we see 4 aspects of hyperautomation in enabling higher levels of automation:

- Use of existing automation/digital transformation technologies like RPA and process mining
- Reliance on machine learning to automate operational decision making

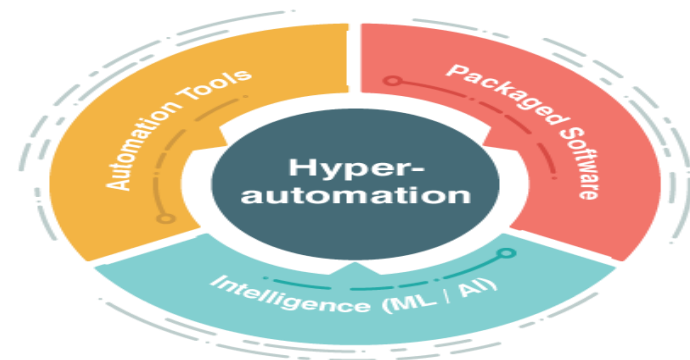
- Organizational and cultural change to drive fast experimentation and rapid adoption of automation technologies
- Process simplification to reduce automation challenges

To add to the confusion, vendors also use different terminology to imply the same thing:

Workfusion: Intelligent automation platform

Hypatos: Cognitive process automation

Fig.No.1 Diagram for Hyperautomation



Technologies enabling hyperautomation

Robotic Process Automation (RPA)

RPA is at the core of hyperautomation. Combining technologies enables RPA to become more intelligent and extends the reach of RPA.

Intelligent Business Process Management Suites (iBPMS)

An iBPMS is an integrated set of technologies that coordinates people and machines in process delivery. An iBPMS enables companies to model, implement, and execute sets of interrelated processes by applying business rules.

Process Mining

Process mining is an analytical discipline to gain a deep understanding of a company's processes. Process mining has a broad range of

use cases from common applications such as process optimization to industry-specific applications like risk identification in an audit. Process mining is critical for process simplification and process understanding which are major enablers of hyperautomation.

Computer Vision

Computer vision (CV) is a combination of AI techniques including image classification and segmentation, and object detection and tracking, which enable machines to interpret information from unstructured data such as images and videos.

Natural Language Processing (NLP)

NLP helps businesses automate tasks that knowledge workers would do. It enables machines to understand unstructured data from emails, social media posts, videos. Then it performs sentiment analysis, automatic language translation or automatic classification of texts into categories depending on your business' automation needs.

Editor's Desk

Leadership qualities

The most important qualities of a good leader include integrity, accountability, empathy, humility, resilience, vision, influence, and positivity. If you are the leader of a team and you are trying to be a good one, here are six tips to help improve yourself.

- Understand Your Style of Leadership.
- Strengthen Your Weaknesses.
- Become a Better Communicator.
- Set Clear Goals and Work Towards Them.
- Get Better at Making Decisions.
- Accept Failures and Learn From Them.

Push your ideas to

Faculty: M.Kavitha, AP/CSE

Student Coordinator:

1. J.Rukshana Safrin, IV CSE

2. G.U.Samyuktha, III CSE

3. R.Anitha, II CSE

Editors-Force Newsletter

Mail-id:forcenewsletter@gmail.com