**DAILY ASSESSMENT 5**

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| **Date:** | 22-05-2020 | **Name:** | Rasika Patil |
| **Course:** | TCSION | **USN:** | 4AL16EC057 |
| **Topic:** | Understand Artificial Intelligence (AI)- Part 1 & Part 2 | **Semester & Section:** | VIII  ‘B’ |
| **Github Repository:** | Rasika B Patil |  |  |

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| **FORENOON SESSION DETAILS** |
| **Image of the session**  **C:\Users\india\Pictures\Screenshots\Screenshot (244).pngC:\Users\india\Pictures\Screenshots\Screenshot (296).png** |
| **REPORT**  **Objectives**   * Understand the definition of artificial intelligence * Discuss the different faculties involved with intelligent behavior * Examine the different ways of approaching AI * Look at some example systems that use AI * Familiar with the different ways of defining AI * Understand what are the different components of intelligent behaviour * Develop an appreciation of the vast scope of AI and the intellectual challenges in this field.   **What is AI?**   * Artificial Intelligence is concerned with the design of intelligence in an artificial device. * What is intelligence?   Humans?   * Behave as intelligently as a human * Behave in the best possible manner * Thinking * Acting   **Typical AI Problems**   * Intelligent entities ( or “agents” ) need to be able to do both “mundane” and “expert” tasks: * Mundane tasks: * Planning route, activity. * Recognizing (through vision) people, objects. * Communicating (through natural language). * Navigating round obstacles on the street * Experts tasks: * Medical diagnosis. * Mathematical problem solving.   **What’s easy and what’s hard?**   * It has been easier to mechanize many of the high-level tasks we usually associate with “intelligence” in people. * Symbolic integration. * Proving theorems. * Playing chess. * Medical diagnosis. * It has been very hard to mechanize tasks that lots of animals can do * Walking around without running into things * Catching prey and avoiding predators * Interpreting complex sensory information * Modeling the internal states of other animals from their behavior   **Intelligent behaviour**   * Perception * Reasoning * Understanding language * Solving problems   **Applications**   * Computer vision * Image Recognition * Robotics * Language processing * Speech processing   **Internet agents**   * The explosive growth of the internet has also led to growing interest in internet agents to * Monitor users tasks * Seek needed information * Learn which information is most useful   **Approaches to AI**   * **Strong AI:** aims to build machines that can truly reason and solve problems which is self aware and whose overall intellectual ability is indistinguishable from that of a human being. * Human like * Non-human-like * **Weak AI:** deals with the creation of some form of computer-based artificial intelligence that cannot truly reason and solve problems, but can act as if it were intelligent. * Weak AI holds that suitably programmed machines can simulate human cognition. * Strong AI maintains that suitably programmed machines are capable of cognitive mental states. * **Applied AI:** aims to produce commercially viable “smart” systems. * **Cognitive AI:** Computers are used to test theories about how the human mind works.   **Limits of AI Today**   * **Today’s successful AI systems** * Operate in well-defined domains * Employ narrow, specialized knowledge * **Commonsense Knowledge** * Needed in complex, open-ended worlds * Understand unconstrained Natural Language   **Agents**   * Operate in an environment * Perceives its environment through sensors * Acts upon its environment through actuators/ effectors * Have goals * Implement mapping from percept sequence to actions * Performance measure to evaluate agents   **Types of Agents**   * Soft bots * Expert Systems * Autonomous spacecraft * Intelligent buildings   **Summary**   * An agent perceives and acts in an environment, has architecture, and is implemented by an agent program. * An ideal agent always chooses the action which maximizes its expected performance, given its percept sequence so far. * An autonomous agent uses its own experience rather than built-in knowledge of the environment by the designer. * An agent program maps from percept to action and updates its internal state. * Representing knowledge is important for successful agent design. * The most challenging environment are partially observable, stochastic, dynamic, and continuous, and contain multiple intelligent agents. |