**DAILY ASSESSMENT FORMAT**

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| **Date:** | **09/07/2020** | **Name:** | **Lavanya B** |
| **Course:** | **Machine learning** | **USN:** | **4al17ec043** |
| **Topic:** | **Introduction** | **Semester & Section:** | **6th A** |
| **Github Repository:** | **Lavanya-B** |  |  |

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| **FORENOON SESSION DETAILS** |
| **Image of session** |
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| **Date:** | **09/07/2020** | **Name:** | **Lavanya B** | |
| **Course:** | **IoT** | **USN:** | **4al17ec043** | |
| **Topic:** | **Chapter 04** | **Semester & Section:** | **6th A** | |
| **AFTERNOON SESSION DETAILS** | | | |
| **Image of session** | | | |
| **Automation**  **What is Automation?**  **Automation is any process that is self-driven and reduces, then eventually eliminates, the need for human intervention.**  **Automation was once confined to the manufacturing industry. Highly repetitive tasks such as automobile assembly were turned over to machines and the modern assembly line was born. Machines are excellent at repeating the same task without fatigue and without the errors that humans are prone to make in such jobs. This results in greater output, because machines can work 24 hours a day without breaks. Machines also provide a more uniform product.**  **The IoT opens up a new world in which tasks previously requiring human intervention can become automated. As we have seen, the IoT allows the collection of vast amounts of data that can be quickly analyzed to provide information that can help guide an event or process.**  **As we continue to embrace the benefits of the IoT, automation becomes increasingly important. Access to huge amounts of quickly processed sensor data started people thinking about how to apply the concepts of machine learning and automation to everyday tasks. Many routine tasks are being automated to improve their accuracy and efficiency.**  **Automation is often tied to the field of robotics. Robots are used in dangerous conditions such as mining, firefighting, and cleaning up industrial accidents, reducing the risk to humans. They are also used in such tasks as automated assembly lines.**  **ML in IoT**  **ML in the IoT**  **One of the features of the IoT is that it enables the collection of extremely large pools of data that can “teach” programs how to respond in certain conditions. Some of the more common uses of ML technology include:**   * **Speech Recognition - Many different companies now offer digital assistants which allow you to use speech to communicate with a computer system. Apple, Microsoft, Google and Amazon all offer this service. These companies not only allow commands to be given verbally, but offer speech-to-text capabilities.** * **Product Recommendation - Systems build up a customer profile and recommend products or services based on previous patterns. Users of Amazon and eBay receive recommendations on products. Organizations such as LinkedIn, Facebook, and GooglePlus recommend users you may wish to connect with.** * **Shape Recognition - Programs exist that allow crude hand-drawn diagrams and notes to be converted to more formal diagrams and text. This allows the shapes and lines of hand writing to be converted to more formal text which can then be searched and analyzed.** * **Credit Card Fraud Detection - A profile is constructed about the purchasing patterns of a client. Any deviation from these patterns triggers an alert and the system automatically takes action. This action ranges from denying the transaction to notifying the authorities. Some of the events that are detected and could indicate a fraudulent transaction include purchasing products not normally purchased, purchases in a different geographic area, rapidly purchasing many different products, and purchasing large-ticket items.** * **Facial Recognition - Security cameras are everywhere, from stores and streets to airports and transportation hubs. These cameras continually scan the crowds, normally watching for dangerous or illegal activities, but they can also be used to identify and track individuals. The system builds a pattern of specific facial features and then watches for a match to these facial patterns triggering some action.** | | | |