**DAILY ASSESSMENT FORMAT**

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| **Date:** | **22/05/2020** | **Name:** | **Navya R** |
| **Course:** | **TCS ion** | **USN:** | **4AL16EC041** |
| **Topic:** | **Understand artificial intelligence**  **Part-1 and Part-2**  **Assessment** | **Semester & Section:** | **8 A** |
| **Github Repository:** | **Navya-R** |  |  |

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| **FORENOON SESSION DETAILS** |
| **Image of session**        **CERTIFICATE:** |
| **Report**    ***Session 1***  ***Understand artificial intelligence Part-1***  Artificial intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions. The term may also be applied to any machine that exhibits traits associated with a human mind such as learning and problem-solving.  As machines become increasingly capable, tasks considered to require "intelligence" are often removed from the definition of AI, a phenomenon known as the [AI effect](https://en.wikipedia.org/wiki/AI_effect). A quip in Tesler's Theorem says "AI is whatever hasn't been done yet." For instance, [optical character recognition](https://en.wikipedia.org/wiki/Optical_character_recognition) is frequently excluded from things considered to be AI, having become a routine technology.  Modern machine capabilities generally classified as AI include successfully [understanding human speech](https://en.wikipedia.org/wiki/Natural_language_understanding), competing at the highest level in [strategic game](https://en.wikipedia.org/wiki/Strategic_game) systems (such as [chess](https://en.wikipedia.org/wiki/Chess) and [Go](https://en.wikipedia.org/wiki/Go_(game))), [autonomously operating cars](https://en.wikipedia.org/wiki/Autonomous_car), intelligent routing in [content delivery networks](https://en.wikipedia.org/wiki/Content_delivery_network), and [military simulations](https://en.wikipedia.org/wiki/Military_simulations).  The traditional problems (or goals) of AI research include [reasoning](https://en.wikipedia.org/wiki/Automated_reasoning), [knowledge representation](https://en.wikipedia.org/wiki/Knowledge_representation), [planning](https://en.wikipedia.org/wiki/Automated_planning_and_scheduling), [learning](https://en.wikipedia.org/wiki/Machine_learning), [natural language processing](https://en.wikipedia.org/wiki/Natural_language_processing), [perception](https://en.wikipedia.org/wiki/Machine_perception) and the ability to move and manipulate objects. [General intelligence](https://en.wikipedia.org/wiki/Artificial_general_intelligence) is among the field's long-term goals. Approaches include [statistical methods](https://en.wikipedia.org/wiki/Artificial_intelligence#Statistical), [computational intelligence](https://en.wikipedia.org/wiki/Artificial_intelligence#Sub-symbolic), and [traditional symbolic AI](https://en.wikipedia.org/wiki/Artificial_intelligence#Symbolic).  Many tools are used in AI, including versions of [search and mathematical optimization](https://en.wikipedia.org/wiki/Artificial_intelligence#Search_and_optimization), [artificial neural networks](https://en.wikipedia.org/wiki/Artificial_neural_network), and [methods based on statistics, probability and economics](https://en.wikipedia.org/wiki/Artificial_intelligence#Probabilistic_methods_for_uncertain_reasoning). The AI field draws upon [computer science](https://en.wikipedia.org/wiki/Computer_science), [information engineering](https://en.wikipedia.org/wiki/Information_engineering_(field)), [mathematics](https://en.wikipedia.org/wiki/Mathematics), [psychology](https://en.wikipedia.org/wiki/Psychology), [linguistics](https://en.wikipedia.org/wiki/Linguistics), [philosophy](https://en.wikipedia.org/wiki/Philosophy), and many other fields.  ***Session 2***  ***Understand artificial intelligence Part 2***  The field was founded on the assumption that [human intelligence](https://en.wikipedia.org/wiki/Human_intelligence) "can be so precisely described that a machine can be made to simulate it". This raises philosophical arguments about the nature of the [mind](https://en.wikipedia.org/wiki/Mind) and the ethics of creating artificial beings endowed with human-like intelligence. These issues have been explored by [myth](https://en.wikipedia.org/wiki/History_of_AI#AI_in_myth,_fiction_and_speculation), [fiction](https://en.wikipedia.org/wiki/Artificial_intelligence_in_fiction) and [philosophy](https://en.wikipedia.org/wiki/Philosophy_of_AI) since [antiquity](https://en.wikipedia.org/wiki/Ancient_history). Some people also consider AI to be [a danger to humanity](https://en.wikipedia.org/wiki/Existential_risk) if it progresses unabated. Others believe that AI, unlike previous technological revolutions, will create a [risk of mass unemployment](https://en.wikipedia.org/wiki/Technological_unemployment#21st_century).  In the twenty-first century, AI techniques have experienced a resurgence following concurrent advances in [computer power](https://en.wikipedia.org/wiki/Computer_performance), large amounts of [data](https://en.wikipedia.org/wiki/Big_data), and theoretical understanding; and AI techniques have become an essential part of the [technology industry](https://en.wikipedia.org/wiki/Technology_industry), helping to solve many challenging problems in computer science, [software engineering](https://en.wikipedia.org/wiki/Software_engineering) and [operations research](https://en.wikipedia.org/wiki/Operations_research). |

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| **Date:** | **22/5/2020** | **Name:** | **Navya R** | |
| **Course:** | **Python** | **USN:** | **4al16ec041** | |
| **Topic:** | **Data analysis with Pandas** | **Semester & Section:** | **8 A** | |
| **AFTERNOON SESSION DETAILS** | | | |
| **REPORT**     * Pandas is a Python library that provides extensive means for data analysis. Data scientists often work with data stored in table formats like .csv, .tsv, or .xlsx. * Pandas makes it very convenient to load, process, and analyze such tabular data using SQL-like queries. In conjunction with Matplotlib and Seaborn, Pandas provides a wide range of opportunities for visual analysis of tabular data. * The main data structures in Pandas are implemented with Series and DataFrame classes. The former is a one-dimensional indexed array of some fixed data type. * The latter is a two-dimensional data structure - a table - where each column contains data of the same type. You can see it as a dictionary of Series instances. * DataFrames are great for representing real data: rows correspond to instances (examples, observations, etc.), and columns correspond to features of these instances.   import numpy as np  import pandas as pd  pd.set\_option("display.precision", 2)   ***Sorting*** A DataFrame can be sorted by the value of one of the variables (i.e columns). For example, we can sort by Total day charge (use ascending=False to sort in descending order):  In [11]:  df.sort\_values(by='Total day charge', ascending=False).head()   ***Indexing and retrieving data*** A DataFrame can be indexed in a few different ways.  To get a single column, you can use a DataFrame['Name'] construction.  In [13]:  df['Churn'].mean() | | | |
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