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| **Date:** | **28-07-2020** | **Name:** | **Dhanya Shetty** |
| **Course:** | **Coursera** | **USN:** | **4AL17EC026** |
| **Topic:** | **Industrial IoT on Google Cloud Platform** | **Semester & Section:** | **6th A** |
| **Github Repository:** | **Dhanya Shetty\_026** |  |  |

**DAILY ASSESSMENT FORMAT**

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| **FORENOON SESSION DETAILS(9.00am to 1.00pm)** |
| **C:\Users\Hp\Desktop\report\28goog1111.PNG**  **C:\Users\Hp\Desktop\report\28goog22222.PNG**  **C:\Users\Hp\Desktop\report\28goog333.PNG**  **C:\Users\Hp\Desktop\report\28goog4444.PNG**  **Google Cloud Platform** (**GCP**), offered by [Google](https://en.wikipedia.org/wiki/Google), is a suite of [cloud computing](https://en.wikipedia.org/wiki/Cloud_computing) services that runs on the same infrastructure that Google uses internally for its end-user products, such as [Google Search](https://en.wikipedia.org/wiki/Google_Search), [Gmail](https://en.wikipedia.org/wiki/Gmail) and [YouTube](https://en.wikipedia.org/wiki/YouTube). Alongside a set of management tools, it provides a series of modular cloud services including computing, [data storage](https://en.wikipedia.org/wiki/Computer_data_storage), [data analytics](https://en.wikipedia.org/wiki/Data_analysis) and [machine learning](https://en.wikipedia.org/wiki/Machine_learning). Registration requires a [credit card](https://en.wikipedia.org/wiki/Credit_card) or bank account details.  Google Cloud Platform provides [infrastructure as a service](https://en.wikipedia.org/wiki/Infrastructure_as_a_service), [platform as a service](https://en.wikipedia.org/wiki/Platform_as_a_service), and [server less computing](https://en.wikipedia.org/wiki/Serverless_computing) environments.  In April 2008, Google announced [App Engine](https://en.wikipedia.org/wiki/Google_App_Engine), a platform for developing and hosting web applications in Google-managed [data centres](https://en.wikipedia.org/wiki/Data_center), which was the first cloud computing service from the company. The service became generally available in November 2011. Since the announcement of the App Engine, Google added multiple cloud services to the platform.  Google Cloud Platform is a part  of **Google Cloud**, which includes the Google Cloud Platform public cloud infrastructure, as well as **G Suite**, enterprise versions of [Android](https://en.wikipedia.org/wiki/Android_(operating_system)) and [Chrome OS](https://en.wikipedia.org/wiki/Chrome_OS), and [application programming interfaces (APIs)](https://en.wikipedia.org/wiki/Application_programming_interface) for [machine learning](https://en.wikipedia.org/wiki/Machine_learning) and enterprise mapping services.   |  |  |  |  | | --- | --- | --- | --- | | **Date:** | **28-07-2020** | **Name:** | **Dhanya Shetty** | | **Course:** | **Coursera** | **USN:** | **4AL17EC026** | | **Topic:** | **Basic statistics** | **Semester & Section:** | **6th A** | | **Github Repository:** | **Dhanya Shetty\_026** |  |  |   **C:\Users\Hp\Desktop\report\28bas1111.PNG**  **C:\Users\Hp\Desktop\report\28bas2222.PNGC:\Users\Hp\Desktop\report\28bas3333.PNG**  **C:\Users\Hp\Desktop\report\24bas44444.PNG**  Statistics is the discipline that concerns the collection, organization, analysis, interpretation and presentation of [data](https://en.wikipedia.org/wiki/Data). In applying statistics to a scientific, industrial, or social problem, it is conventional to begin with a [statistical population](https://en.wikipedia.org/wiki/Statistical_population) or a [statistical model](https://en.wikipedia.org/wiki/Statistical_model) to be studied. Populations can be diverse groups of people or objects such as "all people living in a country" or "every atom composing a crystal” Statistics deals with every aspect of data, including the planning of data collection in terms of the design of [surveys](https://en.wikipedia.org/wiki/Statistical_survey) and [experiments](https://en.wikipedia.org/wiki/Experimental_design). See [glossary of probability and statistics](https://en.wikipedia.org/wiki/Glossary_of_probability_and_statistics).  When [census](https://en.wikipedia.org/wiki/Census) data cannot be collected, [statisticians](https://en.wikipedia.org/wiki/Statistician) collect data by developing specific experiment designs and survey [samples](https://en.wikipedia.org/wiki/Sample_(statistics)). Representative sampling assures that inferences and conclusions can reasonably extend from the sample to the population as a whole. An [experimental study](https://en.wikipedia.org/wiki/Experimental_study) involves taking measurements of the system under study, manipulating the system, and then taking additional measurements using the same procedure to determine if the manipulation has modified the values of the measurements. In contrast, an [observational study](https://en.wikipedia.org/wiki/Observational_study) does not involve experimental manipulation.  Two main statistical methods are used in [data analysis](https://en.wikipedia.org/wiki/Data_analysis): [descriptive statistics](https://en.wikipedia.org/wiki/Descriptive_statistics), which summarize data from a sample using [indexes](https://en.wikipedia.org/wiki/Index_(statistics)) such as the [mean](https://en.wikipedia.org/wiki/Mean) or [standard deviation](https://en.wikipedia.org/wiki/Standard_deviation), and [inferential statistics](https://en.wikipedia.org/wiki/Statistical_inference), which draw conclusions from data that are subject to random variation (e.g., observational errors, sampling variation).[[5]](https://en.wikipedia.org/wiki/Statistics#cite_note-LundResearchLtd-5) Descriptive statistics are most often concerned with two sets of properties of a *distribution* (sample or population): [*central tendency*](https://en.wikipedia.org/wiki/Central_tendency) (or *location*) seeks to characterize the distribution's central or typical value, while [*dispersion*](https://en.wikipedia.org/wiki/Statistical_dispersion) (or *variability*) characterizes the extent to which members of the distribution depart from its centre and each other. Inferences on [mathematical statistics](https://en.wikipedia.org/wiki/Mathematical_statistics) are made under the framework of [probability theory](https://en.wikipedia.org/wiki/Probability_theory), which deals with the analysis of random phenomena.  A standard statistical procedure involves the collection of data leading to [test of the relationship](https://en.wikipedia.org/wiki/Statistical_hypothesis_testing) between two statistical data sets, or a data set and synthetic data drawn from an idealized model. A hypothesis is proposed for the statistical relationship between the two data sets, and this is compared as an [alternative](https://en.wikipedia.org/wiki/Alternative_hypothesis) to an idealized [null hypothesis](https://en.wikipedia.org/wiki/Null_hypothesis) of no relationship between two data sets. Rejecting or disproving the null hypothesis is done using statistical tests that quantify the sense in which the null can be proven false, given the data that are used in the test. Working from a null hypothesis, two basic forms of error are recognized: [Type I errors](https://en.wikipedia.org/wiki/Type_I_error) (null hypothesis is falsely rejected giving a "false positive") and [Type II errors](https://en.wikipedia.org/wiki/Type_II_error) (null hypothesis fails to be rejected and an actual relationship between populations is missed giving a "false negative").Multiple problems have come to be associated with this framework: ranging from obtaining a sufficient sample size to specifying an adequate null hypothesis.  Measurement processes that generate statistical data are also subject to error. Many of these errors are classified as random (noise) or systematic ([bias](https://en.wikipedia.org/wiki/Bias_(statistics))), but other types of errors (e.g., blunder, such as when an analyst reports incorrect units) can also occur. The presence of [missing data](https://en.wikipedia.org/wiki/Missing_data) or [censoring](https://en.wikipedia.org/wiki/Censoring_(statistics)) may result in biased estimates and specific techniques have been developed to address these problems. |

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