PARSHWANATH CHARITABLE TRUST'S
A.P. SHAH INSTITUTE OF TECHNOLOGY
Department of Computer Science and Engineering
Data Science

CSE DATA SCIENCE

Semester :VI_____   Subject :_____DAV_____   Academic Year: 2023 - 2024

GAINING INSIGHTS:

- Information comes in different forms and formats. Data can also be in any kind of structured or unstructured sources.
- The first step is to compile all the data including business data, scientific data, metrics and performance data, and data from social media platforms.

Pre – process Data:

After computing the data, we need to reformat the data so that it becomes convenient for machine learning processing. For this purpose, we have to perform decomposing, filtering or normalization on the data.

Cleaning up Data : To make Sense

Even after pre-processing, there may remain some imperfections. It might be inconsistent, dirty or missing a few important values. One has to manually go through all the data values to find and rectify any inconsistencies.

The step requires ample time and effort to clean it completely for the actual analysis phase.

Strategic Data Analytics

- When the data cleaned carefully and transformed, it is required to use data visualization and statistical methods to uncover patterns in the data.
- Clustering is a common machine learning technique used for statistical data analytics.
- It separates all the data points into different groups based on their common properties and features.

Algorithms for Predictive Analysis

- Now we pick an appropriate machine learning model to make predictions about insights and future trends. The accurate model depends on the type input given and the output that we require. Generally few selected models are implemented to see which one produces the most accurate results.

To validate the Predictions

- Now we have to make ourselves sure that the predictions are accurate.
- It is important to evaluate and identify which model produces the best results for the given data set.
- To identify the right model for the most accurate data insights, we evaluate the performance of different machine learning models. And we get the ideal machine learning model and its accurate data predictions.

Data – Driven Decisions

We can transform the results into visual forecasting models or even decision trees so that the data can be easily understood by all the stakeholders involved and make better business decisions.

Insights of Data Analytics

The benefits of using data analytics:

- Personalise the customer experience,
- Inform business-decision making
- Streamline operations
- Mitigate risk and handle setbacks
- Enhance security

PARSHWANATH CHARITABLE TRUST'S
A.P. SHAH INSTITUTE OF TECHNOLOGY
Department of Computer Science and Engineering
Data Science

CSE DATA SCIENCE

Semester :VI_____   Subject :_____DAV_____   Academic Year: 2023 - 2024

Valuable Insights

To use data analytics to gain valuable insights:

- Let the objective shape the Data analytics; not the other ways round.
- Once the objective are identified, the data strategy can begin.
- Start small and buid the data up.
- Conclusion
- Keep the eye on the prize. Determine measurable business reults.
- Know the source-start with the data that is available.
- Evaluate the users – find out who will be using the platform.
- Maintain exiting work flows.