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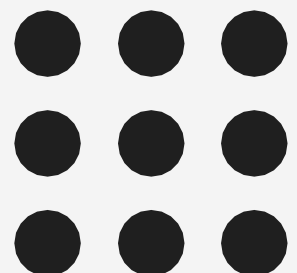
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Department of Information Technology

Course Name –23 ADT202 FUNDAMENTAL OF DATA SCIENCE AND ANALYTICS
II Year / IV Semester

Unit 1 – Introduction to Data science
Setting the research goal

Setting the research goal is the cornerstone of any data science project. It defines the problem to be solved and the objectives to be achieved. A well-articulated goal ensures alignment and clarity throughout the analysis. Collaboration between data scientists, domain experts, and stakeholders is essential.
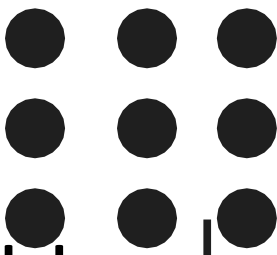
Understanding the Business Context

The business context must be thoroughly understood to set a clear goal. In an e-commerce setting, the goal could be to increase customer retention. This broad objective is refined into measurable questions, such as predicting customer churn.

Narrowing the focus helps in devising targeted and effective solutions.

Once the problem is defined, the goal must be specified and measurable. For example, understanding the factors contributing to customer churn. Data scientists translate the business challenge into analytical tasks. This ensures the solutions directly address the business needs.

Defining Key Performance Indicators (KPIs)

Identify the KPIs and metrics for evaluating success in the project.

In marketing campaigns, metrics like conversion rates and ROI may be used.

KPIs help assess the impact of the analysis and ensure alignment with business objectives.

Clear benchmarks allow for consistent evaluation of project success.

Acknowledge the constraints early on, such as data availability and resources.
These limitations impact the scope and feasibility of the research.
For example, incomplete or noisy data may require additional preprocessing.
Understanding constraints helps in designing a realistic and achievable approach.

Clearly specify the expected deliverables for the project.

Deliverables could include predictive models, dashboards, or actionable recommendations.

For a healthcare organization, a model predicting patient readmission rates may be expected.

Clearly defined deliverables ensure that the results meet the project objectives.

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Collaboration with Stakeholders

Regular communication with stakeholders is vital throughout the project.
It ensures the project stays aligned with evolving business priorities.
Stakeholder engagement helps clarify any changes in scope or expectations.
Collaboration fosters a shared understanding of the goals and results.

Summarizing the Importance of Setting the Research Goal

Setting the research goal provides clarity and focus for the project.
It transforms broad business challenges into specific, actionable tasks.
A well-defined goal drives the project toward meaningful impact and actionable insights.
It acts as a roadmap, guiding data scientists throughout the analysis process.

Conclusion and Key Takeaways

The research goal is the foundation of any successful data science project.
It ensures alignment with business needs and defines success metrics.
Collaborative efforts and stakeholder engagement are key to refining the goal.
A clear, measurable research goal ensures a focused and impactful outcome.

THANK YOU